Collaborators and Contributors to Geotech Activities at Griffith

1: Dr. Ole Hededal : Technical University of Denmark

Ole Hededal obtained his PhD in Computational Mechanics at Aalborg University, Denmark, in 1994. After a short period as Assistant Professor at Aalborg University, he joined COWI Consulting Engineers, DK, for 6 years as specialist in numerical methods for geotechnical engineering working primarily on large infrastructure projects like the fixed link crossing between Denmark and Sweden, the Øresund Bridge, the first Copenhagen Metro and Citytunneln in Malmö, Sweden. After another 3 years as structural specialist in Det Norske Veritas (DNV), where he was responsible for verification of structures for oil/gas platforms and offshore wind turbines, he was appointed Associate Professor in Geotechnical Engineering at the Technical University of Denmark (DTU) in 2004. At DTU, Ole Hededal is heading the geotechnical research group which specialises numerical and physical modelling of performance of large diameter piles for wind turbine foundations and rate dependent properties of high plasticity clays. Dr. Hededal is still involved in several large infrastructure projects in Denmark such as the Femarnbelt Fixed Link and the extension of the Copenhagen Metro called Cityringen.

2: Prof. Manuel Pastor

Education

- Ingeniero de Caminos, Universidad Politécnica de Madrid (June 1975)
- Doctor Ingeniero de Caminos, Universidad Politécnica de Madrid (July 1980)

Research & Position Held

- Researcher at Laboratorio del Transporte y Mecánica del Suelo (Geotecnia) 1975 to 1980
- Researcher at Departamento de Carreteras of Laboratorio del Transporte y Mecánica del Suelo 1980 to 1982
- Researcher, Oceanographic Engineering Department, Centro de Estudios de Puertos y Costas (1982-1985)
- Lecturer, Física de Materiales, ETS de Ing. de Caminos, 1976-1983

- Head of the Computational Engineering Department of Centro de Estudios de Técnicas Aplicadas (1985-2008)
- Prof.Titular Dept. of Matemática e Informática aplicadas a la Ingeniería Civil, ETS de Ingenieros de Caminos de Madrid (1986-2008)

- Visiting Scholar at Universities of Swansea, UK (1983-1984, 1987) Grenoble (September 1991) and Imperial College of London (1992). Honorary Prof. at Hohai University (Nanjing, China).
- Member of the Board of Directors of the European Research Network ALERT Geomaterials

- Participation in European Projects: EPOCH (1992), ALERT (1993-1997), LAMÉ (1998-2001), TMR DIGA (2002-2005), TEMPUS-MEDA Force with ENIT Tunis (2005-2008)

- Participation in cooperative research with China (1993-2005), funded by the Chinese

- Academy of Sciences and the Spanish Agencia Española de Cooperación Internacional

- Supervision and Cooperation in doctoral thesis presented in Madrid, París , Lyon, Montpellier, Tetuán, Hohai (Nanjing), Milán, Bolonia and Rome

Research Areas:

- Soil dynamics: laboratory testing (1975-1980).
- Dynamic behaviour of road materials (1980-1982)
- Constitutive modelling for soil dynamics (liquefaction) (1983-1991)

- Finite element modelling on:
  - Geotechnical Engineering: Landslides, debris flows, flow slides, dynamic behaviour of earth dams, dynamic behaviour of railroad platforms, transport of pollutants,...
  - Harbour Engineering: Resonance, and long wave amplification, coastal hydrodynamics, estuary dynamics.
  - Hydraulics Engineering: Dam break, waves in reservoirs caused by landslides
  - Structural Engineering: Dynamic behaviour of concrete dams with reservoir interaction, Cable and catenary dynamics, Shock propagation and fast dynamics

Awards & Honours

- Samsher Prakash Foundation Award (1994) at University of Missouri (USA)

- Member of the Academy of Sciences of Sevilla, Spain

Editorial Boards

- Int. J. Num. Anal.Methods in Geomechanics,
- Italian Geotechnical Journal,
- Journal of Geomechanics.

Publications: Int. J. Numerical Methods in Engineering, Mechanics of Cohesive Frictional Materials; J. Computational Physics; Geotechnique; Int.J.Numerical and Analytical Methods in Geomechanics; Int.J.Numerical Methods in Fluids; Archives of Mechanics; Computers and Geotechnics

SOME RELEVANT PUBLICATIONS

O.C.ZIENKIEWICZ, A.H.CHAN, M.PASTOR, B.SCHREFLER and T.SHIOMI
COMPUTATIONAL GEOMECHANICS, John Wiley and Sons, 1999;

M.Pastor and C.Tamagnini (Eds): Numerical Modelling of Geomaterials, Hermes, París (Fr) ISBN 2-7462-0537-8 2002;

M.I. Herreros, M. Mabssout, M. Pastor: An eulerian mixed formulation for viscoplastic materials; ***Comput. Methods Appl. Mech. Engrg***. 196 (2007) 1924-1932;

M. Quecedo, L. Tonni, and V. Drempetic: Mathematical, Constitutive and Numerical Modelling of Catastrophic Landslides and Related Phenomena ; ***Rock Mech. Rock Engng.*** (2007)

M.Mabssout, M.I.Herreros, M.Pastor: Wave propagation and localization problems in saturated viscoplastic Geomaterials, ***International Journal for Numerical Methods in Engineering*** *(2006*), Vol 68, Issue 4, pp 425-447 ;

M.Mabssout, M.Pastor, M.I.Herreros, M. Quecedo: A Runge-Kutta, Taylor-Galerkin scheme for hyperbolic systems with source terms. Application to shock wave propagation in viscoplastic geomaterials, ***International Journal for Numerical and Analytical Methods in Geomechanics (***2006) Volume 30, Issue 13 , Pages 1337 - 1355

M.I.Herreros, M.Mabssout, M.Pastor: Application of Level-Set approach to moving interfaces and free surface problems in flow through porous media, ***Computer Methods in Applied Mechanics and Engineering,*** **vol.195**, pg1-25, 2006;

M. Quecedo, M. Pastor, M.I. Herreros, J.A. Fernández Merodo, Qinfen Zhang: Comparison of two mathematical models for solving the dam break problem using the FEM method, ***Computer Methods in Applied Mechanics and Engineering,*** **vol.194**, pg. 3984-4005, 2005

J.A.Fernández Merodo, R.Tamagnini, M.Pastor and P.Mira: Modelling damage with generalized plasticity, **Italian Geotechnical Journal XXXIX**, n4, pp.32-42 (2005);
Impostor, M. Quecedo, M. I. Herreros, E. González, B, Haddad, J .A .Fernández Merodo and P.Mira: Modelling of landslides and waves induced by them in reservoirs and other water bodies, ***Italian Geotechnical Journal XXXIX***, n4, pp. 46-62 (2005);

P.Mira, M.Pastor, T.Li et X.Liu: Failure problems in soils: an enhanced strain coupled formulation with application to localization problems, ***Revue française de genie civil,*** **Vol. 8**, n5-6, pg.735-759, 2004;

M. Quecedo, M. Pastor and M.I. Herreros: Numerical modelling of impulse wave generated by fast landslides: ***Int. J. Num. Meth. Eng.,*** **59:** 1633-1656, March 2004

M. Quecedo, M. Pastor, M.I. Herreros and J.A. Fdez. Merodo: Numerical modelling of the propagation of fast landslides using the Finite Element Method: ***Int. J. Num. Meth. Eng.***, Vol. 59, Issue 6, pp. 755-794, February 2004;

M.Quecedo and M.Pastor, "Finite Element modelling of free surface flows on inclined and curved beds", ***Journal of Computational Physics*** (2003) 45-62:

M.Pastor, M.Quecedo, J.A.Fernández Merodo, M.I.Herreros, E.González and P.Mira, Modelling Tailing dams and mine waste dumps failures, ***Geotechnique LII,*** 579-592, 2002:

M. Quecedo, M. Pastor, M.I. Herreros and J.A. Fdez. Merodo, : Numerical modelling of the propagation of fast landslides using the Finite Element Method***, Int. J. Num. Meth. Eng.,*** **Vol. 59**, Issue 6, pp. 755-794, February 2004;

J.A. Fernández Merodo, M. Pastor, P. Mira, L. Tonni, M.I. Herreros, E. González y R. Tamagnini, : "Modelling of diffuse failure mechanisms of catastrophic landslides", ***Comp.Meth.Appl.Mech.Engrg***. pp. 2911–2939, 2004

3: Prof. Paul Marinos

Dr Paul Marinos received a Mining Engineering degree from the School of Mines of the National Technical University of Athens, Greece in 1966, a postgraduate degree in Applied Geology from the University of Grenoble, France, and his Doctorate in Engineering Geology from the same University in 1969. He worked for French and Greek design and construction companies until 1977 and then was elected as Professor at Democritus University in Northern Greece. Since 1988 Dr Marinos has been Professor of Engineering Geology in the School of Civil Engineering in the National Technical University of Athens and has served as head of the Geotechnical Section of the School for several years. From 2001 to 2004 and from 2006 to 2008 he was the Director of a Graduate Course in Tunneling and Underground Construction. He was a visiting Professor in the Geology Department of the University of Grenoble (1987) and of the School of Mines in Paris (2003).
Dr Marinos is a member of AEG and GSA and fellow of the Geological Society of London. He is a past President of the International Association of Engineering Geology and the Environment (IAEG), immediate past president of the Geological Society of Greece, past president of the Greek chapter of the International Tunnelling Association and honorary member of the International Association of Hydrogeologists (IAH).

Dr Paul Marinos has received several awards, including the Hans Cloos medal of IAEG, and the Andre Dumont medal of the Geological Society of Belgium. He was selected for the presentation of named lectures, including the 6th Glossop Lecture in London (2002), the 19th Rocha Lecture in Lisbon (2002), the 33rd Cross Canada Lectures Tour (2005), the Rock Mechanics annual Lecture in Madrid (2006) and as 2010 R. Jahns Distinguished Lecturer by AEG and GSA. Dr Marinos and his team conduct research on a variety of applications of geology to engineering, mainly rock mass characterization, weak rock properties and behavior, with special emphasis to tunnel design. His work also covers landslides, dam geology, and engineering in karstic terrain. His other significant interest is the protection of historic monuments and archeological sites. Dr Marinos has authored or co-authored over 300 papers in journals or major conference proceedings. He was a key or invited lecturer in more than 40 conferences or special events. He has given lectures to University Courses or Workshops, among them the Federal Technical University (EPFL) in Lausanne, Switzerland, the Polytecnico of Turin, Italy, the University of Durham, U.K., the University of Coimbra, Portugal, the University of Kobe, Japan, the Black Sea University Romania, the Aristotle University of Thessalonica, Greece, and the Griffiths University, Australia. He has edited proceedings published by international publishers. Dr Marinos is Co-Editor in Chief of the International Journal "Geotechnical and Geological Engineering" and a member of the Editorial Board of a number of prominent journals as "Engineering Geology", "Bulletin of the International Association of Geology"," Landslides", "Environmental Geology", "Rock Mechanics" and from 2009 "Environmental and Engineering Geosciences".
Dr Paul Marinos has extensive industrial experience having served as consultant, independent reviewer and member of consulting boards or panel of experts on major civil engineering projects in Ecuador, France, Greece, India, Iran, Israel, Jordan, Morocco, Portugal, Saudi Arabia, South East Asia, Spain, Sweden and Turkey.

4: Prof William Van Impe

Education:

Civil Engineering Degree – Ghent State University, Ghent, July 1973; Doctor Degree of Engineering Sciences – Ghent State University, June 1981

Academic Position: Full professor at the Ghent State University ; director of the Soil Mechanics Laboratory

International Positions: Vice-President ,ISSMGE; President ,ISSMGE; President of the FIGS

Prize and Awards: Vienna-Terzaghi-Lecturer, (1st Austrian Baugrundtagung), Vienna Technical University; Terzaghi chair for Soil Mechanics, May 1997; - Professor Honoris Causa, Universidad Mayor de San Simon, Cochabamba, Bolivia, March 1999; John Mitchell-Lecturer, DFI Conference, Nice, 1-4 June 2002; Nonveiller Lecturer, 3rd National Conference, Hvar, 2-5 October 2002; De Beer award, Brussels, 28 April 2004; Manuel Rocha Award, Lissabon, 6 December 2004; Nagadi Endowment Award, University of Mysore, India, October 2006; Szechy Medal, Budapest, 8 February 2008.

PAST AND PRESENT MEMBERSHIP OF MOST RELEVANT PROFESSIONAL AND SCIENTIFIC ASSOCIATIONS:

Chair of the Belgian Geotechnical Society; Director of the Belgian Royal Academy of Overseas Sciences (β-sciences); Chair of TC5 – Environmental Geotechnics of the ISSMGE; Chair of TC14 – Dredging ; Chair of TC18 – Deep Foundations of the ISSMGE; Member of the "Deep Foundations Institute", New Jersey, USA; Member of TC17 - Ground Improvement, Reinforcement and Grouting of the the ISSMGE; Member of the AGI – Italian Geotechnical Society; - Member of TC4 – Earthquake Geotechnical Engineering of the ISSMGE; Member of CEDA – European Dredging Association; Member of the Flemish National Research Council;
-Co-ordinator of Civil Engineering development programs for the Ghent University (Rwanda, Bolivia...); Member of the Editorial Board, Journal "Ground Improvement;

Peer Review: Ground Improvement Journal; ASCE Journal of Geotechnical and Geoenvironmental Engineering; International Journal of Geoengineering Case Histories; Founder and co-editor ,Journal of Geotechnics for Transportation Infrastructure;

RESEARCH ACTIVITIES:

Prof. W. Van Impe has been concentrating over the past 25 years mainly on 4 topics : Ground improvement methods with special emphasis to dynamic compaction techniques: Deep foundations with special emphasis to screw piles ; it has resulted in the organisation of
three International Conferences in Ghent (BAPI 1988 – BAPII 1993 – BAPIII 1998 – BAPIV
2003); - Environmental geotechnics with special emphasis on waste mechanics and underwater geo- environmental issues; Lateral loading of pile groups resulting in a book in co-autorship met Prof. L. Reese, Texas, USA.
Moreover the research guided in the Laboratory of Soil Mechanics under the Directorship of Prof. W. Van Impe is focussing (in addition to the former topics) on : Seismic cone testing; Small strain laboratory testing; - Large strain consolidation theories; Geoenvironmental research topics (contaminant flow, barriers, …); Soft soil excavations; Dredging geotechnology; Soft soil improvement ; Contaminant flow through porous media; Long term stiffness of crushable sands

CONSULTING:

Prof. W. Van Impe has been involved in a great number of uncommon geotechnical engineering projects all over the world, with some of the most relevant :
Geotechnical dredging issues for man made islands (Jurong), Singapore ; Tunnelling under Orly airport, Paris, France – Smet Company; - Remediation of contaminated sites – Venice port – SGI, Torino, Italy; Stability problems of large decantation ponds at Couillet (Solvay) and at Ghent - Rhodia Chemie Company; Deep foundations all

over the world, such as bored pile design, deep excavation stability, specific screw pile applications etc.; Lateral loading of piles; analysis of many case studies in the US; Quay walls and liquefaction in harbour of Dunquerke – France; Liquefaction problems in offshore conditions at Damietta harbour Egypt; Underwater dam in the harbour of Antwerp – Belgium; Messina strait bridge – foundation engineering concept evaluation committee; Deep excavations in soft underconsolidated clays – Russia; Many near shore geotechnical problems related to quay walls and dredging issues all over the
world

CONFERENCES

In addition to the usual presenting of papers, Prof. W. Van Impe has been involved in an active role as invited or key-speaker, session chairman, discussion leader or panellist in over 80 major conferences.

Books :

Soil Improvement Techniques and their evolution (in English and Chinese);
Single Piles and Piles Groups under lateral loading (in co-authorship with L. C. Reese); The overview of almost two decades of full scale research on screw piles; Underwater dam on very soft soils; Single Piles and Piles Groups under lateral loading (in co-authorship with L. C. Reese)

Editor of Conference Proceedings:

Proceedings of the 2nd International Symposium on Numerical Models in Geo-mechanics, Ghent ; Proceedings of the 1st International Geotechnical Seminar : Deep Foundations on Bored and Auger Piles, Ghent; Proceedings of the 2nd International Geotechnical Seminar : Deep Foundations on Bored and Auger Piles, Ghent; Proceedings of the 3rd International Geotechnical Seminar : Deep Foundations on Bored and Auger Piles, Ghent ; Proceedings of the 4th International Geotechnical Seminar : Deep Foundations on Bored and Auger Piles, Ghent; Proceedings of the 5th International Geotechnical Seminar : Deep Foundations on Bored and Auger Piles;

Sole author papers

More than100 internationally distributed papers.

Joint papers

More than 120 internationally distributed papers.

5: Professor Pedro Sêco e Pinto

Professor Pedro Sêco e Pinto :**ISSMGE President (2005-2009)** --Pedro S. Sêco e Pinto is Licenciated in Civil Engineer (6 years course) (with honours) in 1971, maintained a link with the industry between 1971-1975, received Master of

Engineering (with honours) in 1977. He was awarded two academic degrees Specialist in Geotechnique (Ph.D. Degree), with honours, in 1983 and Principal Research Engineer (Full Professor degree), with high honours, in 1992 at LNEC. He was elected Vice-President for Europe 2001-2005.
He is Full Professor of Geotechnical Engineering of University of Coimbra (since 1994) and Invited Professor of University New of Lisbon (since 1983). He was Invited Lecturer in University of California (1992-1994). He served as Chairman of TC4 "Earthquake Geotechnical Engineering"(ISSMGE) (1994-1999) and President of Portuguese Geotechnical Society (1996-2000). He was Head of Division at LNEC from 1986- 2004.
He has acted as United Nations Consulting for Design, Instrumentation and Surveillance Technology for Dams and other Hydraulic Structures. He is a member of Portuguese Commission on Dams, Portuguese Commission on Dams Codes and Seismic Aspects of Dams Committee of ICOLD. He has been an active consultant working on major projects throughout Europe, Asia, Africa and South America. He is author or co-author of 300 technical reports and more than 100 papers for journals, national and international conferences. He is editor of proceedings for 4 international conferences on Earthquake Geotechnical Engineering and Environmental Geotechnics and contributed for four books. He has presented special lectures and state-of-the art reports and selected contributions in more than 60 countries in the 6 Regions.
His principal areas of interest include soil dynamics, earthquake engineering, embankment dams, special foundations, tunnelling and environmental geotechnics. He is a member of several national and international Societies, Technical Committees and Editorial Boards and has participated in several European Community Projects. He has been organizer and co-organizer of more than 15 national and international conferences, symposia and seminars. He has received many awards and honours.

6 : Prof. FUMIO TATSUOKA

Major academic experiences:

2004 to date: Professor and Chair, Department of Civil Engineering, Tokyo University of Science
1997 - 2004: Professor, Department of Civil Engineering, the University of Tokyo
1977 - 1991: Associate Professor and then Professor, Institute of Industrial Science, University of Tokyo
1973 - 1977: Research Engineer, Public Works Research Institute, the Ministry of Construction
1972: Dr. of Eng. in Geotechnical Engineering from University of Tokyo

Research Interests:

Laboratory testing methods for geomaterials, including clays, sands, gravels and soft rocks / Deformation and strength characteristics, including rate effects, of geomaterials / Foundation engineering, including bearing capacity of shallow foundations / Ground improvement by cement-mixing and soil reinforcing with geosynthetics.

Awards (international): 1994: The IGS award from the IGS / 1996 & 2003: the Hogentoglar Award from ASTM / The 1996-1997 Mercer Lectureship from the ISSMG / 1997: The best paper award of the Ground Improvement Journal from the ISSMGE / 2000: the Hogentoglar Award from ASTM / 2008: The best paper published in *Geosynthetics International* in 2007 (two awards for two papers) / 2009: The best paper for the year of 2008, the Taiwan Geotechnical Society

Major Society Activities: Editor in Chief; "Soils and Foundations", the Japanese Geotechnical Society (1995-1999) / Vice President for the Asia Region of the ISSMGE (2001-2005) / Vice President of the Japanese Geotechnical Society (2001-2002) / Vice President of the Japanese Society for Civil Engineers (2005-2006) / Chairman of the IGS Japanese Chapter (1997-2006) / Vice President of the IGS (2002-2006) / President of the Japanese Geotechnical Society (2007-2008) / President of the IGS (2006-2010)

Technical papers:
More than 400 technical papers have been published in "*Soils and Foundations*", "*Geotechnical Testing Journal*", "*Géotechnique*", "*Journal of Geotechnical and Environment Engineering*", "*Ground Improvement Journal*", "*Geosynthetics International*", "*Geotextiles and Geomembranes*" and other publications.

7: Prof. Der-Wen Chang

Prof. Der-Wen Chang teaches at The Department of Civil Engineering of Tamkang University (TKU), Taipei, Taiwan for over 19 years. He received Ph.D. in Civil Engineering at The University of Texas at Austin in 1991 and MS in Civil Engineering at Michigan State University in 1987. Prof. Chang has supervised the research work of over 60 Master Thesis and 3 Ph.D. Thesis at TKU, and published more than 160 articles as the Journal, Conf. papers and reports. Nearly all his research studies are related to numerical modeling and dynamic analyses for the geotechnical structures. His research experiences include NDT methods on pavements, seismic behaviors of the pile foundation, constitutive modeling of the soils, and recent study on the performance based design for the earth structures. Prof. Chang is also the visiting Professor at University of Washington at Seattle, US in 2008 and LN Gumilyov Eurasian National University at Astana, Kazakhstan for research studies in 2010. Other than the research works, Prof. Chang devotes himself a great deal to serve the communities. He involves heavily and indeed shows his good performance in the public works related to education and constructions. Prof. Chang is now serving as the Secretary General of Chinese Taipei Geotechnical Society, GC member of SEAGS, Editorial Panel for SEAGS/AGSSEA J. of Geotechnical Engineering, Committee members for Public Construction and Hazard Prevention in Taipei City and Taipei County governments. He will continue to work in the academia and hoping that his studies can better improve the civil engr. technologies.

8: Associate Professor Miguel Pando

Dr. Miguel A. Pando is an Associate Professor of Civil and Environmental Engineering at the University of North Carolina at Charlotte. Prior to joining UNC Charlotte

he was an associate professor at the University of Puerto Rico at Mayaguez where he was also the Director of Geotechnical Engineering Research Laboratory. Dr. Pando received his Ph.D. in Civil Engineering (geotechnical engineering) from Virginia Tech and his M.S. in Civil Engineering (Geotechnical Engineering) from the University of Alberta in Edmonton Canada. He was magna cum laude for being first in his class of B.S. (Civil Engineering) at the Javeriana University in Bogota, Colombia.

Dr. Pando is a professional engineer (P.Eng.) in the Province of Ontario, Canada and has over 10 years of geotechnical consulting experience in projects such as tailing dams, slope stabilization, tunnelling, geotechnical site investigations, foundations, earth structures, amongst others.

Dr. Pando has developed and taught several geotechnical engineering courses at both the undergraduate and graduate levels. Dr. Pando has published over 80 refereed journal and conference papers on various topics in geotechnical engineering. Dr. Pando is a member of ASCE, ASTM, TRB, CGS, US Dams, and other professional organizations. He has been a frequent reviewer for several national and international geotechnical journals and geotechnical conferences including *Journal of Geotechnical and Geoenvironmental Engineering ASCE*, *Geotechnical Testing Journal ASTM*, *Journal of Composites ASCE*, Journal of Material Engineering ASCE, Canadian Geotechnical Journal, and several others.

9: Associate Professor Yoshihisa Miyata

Dr. Yoshihisa Miyata is an associate professor at Department of Civil and Environmental Engineering at the National Defence Academy of Japan. He received his Doctor of Engineering degree from Kyushu University in 1999. Prof. Miyata's research and practical experiences have dealt with reinforced earth structures, ground improvement and remediation of contaminated ground. Prof. Miyata has authored or co-authored more than 200 peer-reviewed journal papers and conference papers. He is a member of the Executive Board of Soils and Foundations, Technical Committee on Ground Improvement in International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), and Technical Committee on Earth Reinforcement in International Geosynthetics Society (IGS). He was chair of Technical Committee for International Symposium on Earth Reinforcement (IS Kyushu) in 2007, guest editors of two special issues of IS Kyushu 2007 in Geosynthetics International and Geotextiles & Geomembranes. Prof. Miyata has received several research grants from the Japan Ministry of Education, Culture, Sports, Science and Technology, the Japan Ministry of Defense and industries. He has received the IGS Gold Medal, the R.M. Quigley Award of the Canadian Geotechnical Society (CGS), and the best paper award of Japan chapter of IGS, and Faculty Research and Development awards at National Defence Academy.

10: Prof. Chungsik Yoo

Affiliation: Sungkyunkwan University

Research Interests: Tunneling and Deep excavation, Geosynthetics, Unsaturated soil, Numerical simulation of geostructures, Use of large-scale computing in geotechnical engineering, Integration of IT into routine geotechnical design

Professor Chungsik Yoo is a Professor of Civil and Environmental Engineering at Sungkyunkwan University in Korea. He obtained his Ph.D. in Civil Engineering from the Pennsylvania State University in 1993. He worked as a Geotechnical Engineer at Mueser Rutledge Consulting Engineers in USA and subsequently became a faculty member at Sungkyunkwan University in 1994. Prof. Yoo is the recipient of 2010 IGS Award from the International Geosynthetic Society and has co-authored over 150 technical papers in geotechnical engineering based on laboratory testing, numerical modeling, and field testing. He is currently an Executive Council member of Korean Tunneling Association, Korean Geosynthetic Society. He is also serving as an Editorial Board Member for Geotextiles and Geomembranes and the Vice Animateur of Working Group "Research" of International Tunnelling Association.

11: Krishna Reddy

Dr. Krishna Reddy is Professor of Civil and Environmental Engineering at the University of Illinois at Chicago (UIC). He is also the Director of Geotechnical and Geoenvironmental Engineering Laboratory at UIC. Dr. Reddy received his Ph.D. in Civil Engineering from the Illinois Institute of Technology, Chicago. He received gold medals for being first in his class of B.S. (Civil Engineering) at Osmania University and M.S. (Civil Engineering) at the Indian Institute of Technology, Roorkee.

Dr. Reddy is a professional engineer (P.E.) in the State of Illinois and worked as civil engineer and project manager in consulting engineering companies for several years. He has been involved in several major projects dealing with geotechnical site investigations, foundations, earth structures, landfills, contaminated sites, and groundwater flow and contaminant transport modelling.

Dr. Reddy teaches various geotechnical and geoenvironmental engineering courses at both the undergraduate and graduate levels. Dr. Reddy has developed and taught several geoenvironmental engineering courses, including *Environmental Geotechnology*, *Environmental Remediation Engineering*, and *Design of Landfills and Impoundments*. He has also developed and taught professional short courses.

Dr. Reddy's research and consulting expertise includes geotechnical site investigations, structural foundations, earth structures, polluted site remediation, landfills, and waste recycling. Dr. Reddy's research has been funded by the National Science Foundation, the Gas Research Institute, the Environmental Protection Agency, the Department of Commerce and Community Opportunities, and several private industries and consulting firms.

Dr. Reddy has published over 200 refereed journal and conference papers on various topics in geotechnical and geoenvironmental engineering. He is the co-author of two comprehensive books, "**Geoenvironmental Engineering: Site Remediation, Waste Containment, and Emerging Waste Management Technologies**" and "**Electrochemical Remediation Technologies for Polluted Soils, Sediments and Groundwater**", both published by John Wiley. He has also edited eight conference proceedings and authored several book chapters.

Dr. Reddy is the North America Editor of the *Land Contamination & Reclamation* journal and an Associate Editor of ASCE's *Journal of Hazardous, Toxic and Radioactive Waste*, and he served or currently serving on the editorial boards of *ASCE Journal of Geotechnical & Geoenvironmental Engineering, ASTM Geotechnical Testing Journal*, *Journal of Soil and Sediment Contamination, Journal of Hazardous Materials, International Journal of Earth Sciences and Engineering, and Waste and Biomass Valorisation Journal.*

Dr. Reddy is a member of ASCE, ASTM, NGWA and other professional organizations. He served as the secretary, vice-chair and chair of the Geotechnical Group and Director on the Board of the ASCE Illinois Section and also served as the faculty advisor for the ASCE Student Chapter at UIC. He was the co-chair of ASCE's *GeoCongress 2008: Challenge of Sustainability in Geoenvironment*. Currently, he is the chair of the ASCE's Geoenvironmental Engineering Committee.

Dr. Reddy has delivered over 125 presentations, including several invited and keynote presentations, at the national and international workshops and conferences. He has received several awards and honours for excellence in teaching, research, and professional service, including the prestigious University of Illinois Scholar Award and the UIC Award for Excellence in Teaching.

Website: www.uic.edu/~kreddy

12: Dr. Hirofumi Toyota

Dr. Hirofumi Toyota has been active in geotechnical engineering field for more than 15 years. He graduated at Tohoku University in Japan, and gained a master and a doctoral degree from the University of Tokyo. Afterwards, he immediately became a research associate at Nagaoka University of Technology in Japan and started teaching and research work as a geotechnical engineering researcher. He is currently an associate professor at Nagaoka University of Technology.

Several natural disasters, which are earthquakes, heavy rain and snow, attacked his living area from 2004. He exerted to organise investigation groups and contributed to publish the investigation reports. In evaluation of this contribution, he became a secretary-general at Hokuriku branch of Japanese Geotechnical Society (JGS).

In addition, he serves as important position on many technical committees. He is familiar with laboratory soil testing including triaxial, torsional shear and ring shear tests. Therefore he has served on a secretary-general or a member at several standardisation committees of JGS. He is also a member of CEN/TC341/WG6 (Laboratory tests on soils). One of his study topics is the mechanical properties of unsaturated soils and he has published a lot of papers related to unsaturated soils. Then, he has been selected as a member of TC106 (Unsaturated soils) of ISSMGE. Since he has published widely on soil dynamics and slope stability problems, he is a secretary or a member of editorial committee of several journals such as "Soils and Foundations (JGS)" and "Journal of Geotechnical Engineering at Japan Society of Civil Engineering (JSCE)".

13: Prof. In-Mo Lee

Dr. In-Mo Lee received his B.S. degree (with honors) in Civil Engineering from Seoul National University, M.S. and Ph.D. degrees in Geotechnical Engineering (with perfect record) from Ohio State University. He has been a professor of Civil, Environmental, and Architectural Engineering at Korea University since 1988. He is a full member of the National Academy of Engineering in Korea. Dr. Lee's main research area is tunneling and underground structure- related geomechanics. He has published more than 300 papers in international and domestic journals as well as in conference proceedings. He has also delivered numerous keynote, invited, special, and theme lectures worldwide. Dr. Lee is currently the director of Institute of Underground Space Technology at Korea University. He served as the president of Korean Tunneling and Underground Space Association from May, 2006 to April, 2008 and is currently the president of International Tunneling and Underground Space Association (ITA).

14: Dr. Nobuyuki Yoshida

Dr. Nobuyuki Yoshida obtained the degrees of B.Sc. (1981) and M.Sc. (1983) from Kobe University, Japan and Ph.D. (1990) from University of Alberta, Canada under the supervision of Professor N.R. Morgenstern with the external examiner of Professor E. Hoek, then Professor of University of Toronto, Canada. He has been a research associate and lecturer at Kyoto University and is now working as an associate professor at Research Center for Urban Safety and Security of Kobe University.

Dr. Yoshida has served as either chairperson or member for various technical committees in Japanese Geotechnical Society and Japan Society of Civil Engineers in relation to Transportation Geotechnics. He is currently the secretary of TC202 (Transportation Geotechnics) of ISSMGE and also serving as the chairperson of its domestic committee. His research topic covers physical phenomena encountered in geotechnical and pavement engineering, especially deterioration in mechanical characteristics, performance and serviceability of geotechnical structures and their elements. Deeply involved are mechanical characteristics of geomaterials including pavement material; dynamic behavior of pavement; design, maintenance and rehabilitation and life cycle cost of pavement; long-term stability and performance of soft rock foundation and slope, and so on.

15: Dr. Jidong Zhao

Dr. Jidong Zhao obtained both his Bachelor Degree and Ph.D. in Civil Engineering from Tsinghua University, China. He joined the Discipline of Civil, Surveying and Environmental Engineering at University of Newcastle, Australia, in 2003, and worked as a research fellow from 2003 to 2006. From 2007 to 2008 he was appointed as a Lecturer at the University of Newcastle. In Sept 2008 he accepted an appointment from Hong Kong University of Science and Technology (HKUST) and joined the Department of Civil and Environmental Engineering. He is now working as an Assistant Professor in Geomechanics in the geotechnical group at HKUST.

Dr. Zhao has authored around 50 technical papers in international journals and conferences. He is/was the principal investigator for a number of research projects sponsored by Research Grants Council of Hong Kong (RGC-HK), Australian

Research Council Discovery Project (ARC-DP) and Research Grant Committee of University of Newcastle (RGC-UN). His major interests focus on the following areas: constitutive modelling in soil mechanics and geomechanics; nonlinear finite element algorithms and computations; limit and shakedown analysis in application to geotechnical/pavement engineering; micro-aeromechanics; multi-scale modelling of granular materials; coupled multi-physics modelling of fractured rocks; soft soil engineering relevant to embankments and slopes; and gradient plasticity. He has been a frequent reviewer for a number of major journals, including *Computer & Geotechnics*, *Journal of Geotechnical and Geoenvironmental Engineering ASCE*, *International Journal for Numerical and Analytical Methods in Geomechanics, Computer & Structures*, *Computational Mechanics*, *Geotechnical Testing Journal ASTM*, *Journal of Engineering Mechanics ASCE*, *KSCE Journal of Civil Engineering* (Springer), *International Journal of Solids and Structures*. Meanwhile, he has been a grant assessor for Australia Research Council (ARC) Discovery/Linkage Projects and Research Grants Council of Hong Kong. He is an active member for a number of professional societies, including *International Society for Soil Mechanics and Geotechnical Engineering* (ISSGME), *Hong Kong Society of Theoretical and Applied Mechanics* (HKSTAM), *Australian Geomechanics Society* (AGS), *and Australian Association for Computational Mechanics* (AACM). He currently serves as the secretary for ISSMGE Technical Committee for Numerical Methods in Geomechanics (TC103) (2010-2013).

16: Prof. Fusao Oka

Prof. Oka is Professor of Civil and Earth Resources Engineering at Kyoto University in Japan. He has many years of experience in geomechanics with special emphasis on constitutive modelling of geomaterials, liquefaction analysis, strain localization problems and experimental works, numerical modelling of multi-phase materials such as chemo-thermo-hydro-mechanical modelling of Methane hydrate containing ground. His research expertise covers engineering applications such as soil liquefaction, consolidation and excavation problems with theoretical and experimental approach. Prof. Oka has particular interest in the viscoplastic modelling of geomaterials and related strain localization behaviour. He gave a special lecture at the plenary session of 16th ICSMGE on computational geomechanics in 2005. He has published more than 200 papers in this field and has received many awards from the Japanese Geotechnical society (2005), Japan Society of Civil Engineers (1993), and IACMAG (1997, 2006). He has been serving as a chair of TC34 of ISSMGE on Prediction and Simulation Methods in Geomechanics, presently a core member of TC103 of ISSMGE, and chaired the 4th International Workshop on Strain Localization and Bifurcation Theory for Soils and Rocks (1997), the ISSMGE International Symposium on Deformation and Progressive Failure in Geomechanics (1997), and the International Symposium on Prediction and Simulation Methods for Geohazard Mitigation by JGS and ISSMGE (2009). He is currently serving as EBM of the *International Journal of Numerical and Analytical Methods in Geomechanics*, Computers and Geotechnics and the *International Journal of Geomechanics and Geoengineering*.

17: Prof. Daichao Sheng

Current Address

School of Engineering,
The University of Newcastle
Callaghan, NSW 2308, Australia
Tel: +61-2-49215746, Fax: +61-2-49216991
Email: Daichao.Sheng@newcastle.edu.au
Webpage: http://livesite.newcastle.edu.au/cgmm

Qualifications

1986	BSc (Engineering Geology)	Lanzhou University, China
1988	MSc (Civil Engineering)	Luleå University of Technology, Sweden
1990	Licentiate in Engineering (tekn lic)	Luleå University of Technology, Sweden
1994	Doctor of Engineering (tekn doktor)	Luleå University of Technology, Sweden

Appointments

1997 – Present	Professor (2007), Associate Prof. (2005), and Senior Lecturer (2001) School of Engineering, The University of Newcastle, Australia
2006 – Present	Co-Director Priority Research Centre for Geotechnical and Material Modelling School of Engineering, The University of Newcastle
2007 – 2009	Assistant Dean (Research Training) Faculty of Engineering & Built Environment, the University of Newcastle

Research Interests

- Unsaturated soil mechanics
- Finite element algorithms for nonlinear problems in engineering
- Large deformation geomechanics
- Contact mechanics for soil-structure interaction
- Geotechnical and Geoenvironmental Engineering

Research Publications and Citations

- Peer-Reviewed Journal Papers (C1): 60(total), 5(2009), 9(2008), 10(2007), 8(2006)
- Peer-Reviewed Conference Papers (E1): 58(total), 2(2009), 4(2008), 8(2007), 5(2006)
- ISI citations: 102(2009), 92(2008), 53(2007), 34(2006)

Editorial Board member

- Associate Editor for *Canadian Geotechnical Journal* (A* in ERA ranking)
- Editorial Board for the Elsevier journal *Computers and Geotechnics* (A in ERA ranking)

Awards

- First Prize, the Nordic Hydrological Society (NHF) for the best paper in hydrology and hydrogeology for the years 1995 and 1996.
- 2004, Young Investigator Award in Computational Mechanics. This award is to recognise the outstanding accomplishments of a Young Investigator through published works in computational mechanics, Awarded at the 6th World Congress in Computational Mechanics.

- 2006, Trollope Medal (as a co-author), Australian Geomechanics Society
- 2009, Quigley Award, A primary award by the Canadian Geotechnical Society for the best paper published in Canadian Geotechnical Journal in 2008.

Industrial and Professional Involvement

- Fellow, Engineers Australia, FIEAust, since 2009
- Australia Geomechanics Society, Committee member of Newcastle Chapter, since 2002
- Australia Geomechanics Society, Treasurer of Newcastle Chapter, 2002-2004
- Australian Association of Computational Mechanics, Executive Committee, since 2008

National Competitive Research Grants

- Australian Research Council, Discovery Projects (2000-2009): $2.2 M Australian Dollars
- Australian Research Council, Linkage Projects (2000-2009): $0.3M Australian Dollars
- Swedish Research Council for Engineering Sciences (1994-1997): 1.7 M Swedish Kronor

Keynote Lectures

- 12th IACMAG, Goa, India, July 2008 (Elastoplastic modelling of unsaturated soils: an overview);
- 5th International Conference on Unsaturated Soils, Barcelona, Spain, 6-8 Sept 2010…

18: Dr. V.N. GEORGIANNOU

QUALIFICATIONS: Civil Engineer
M.Sc., D.I.C., Ph.D., Imperial College of London
PRESENT STATUS: Associate Professor, NTU of Athens
ADDRESS: Soil Mechanics Laboratory,
Iroon Polytechniou 9, Zografou 15780
TEL: +30 210772 3489 NTUA
FAX: +30 210772 3428 NTUA
E mail: vngeor@civil.ntua.gr

Dr Georgiannou graduated from NTU Athens in 1982. She obtained her Master of Science in "Soil Mechanics and Engineering Seismology" (with Distinction) in 1985 and her PhD on "The Behaviour of Clayey Sands under Monotonic and Cyclic Loading", in 1988 from Imperial College of London. Between 1988 and 1997 she worked as Research Assistant and Research Fellow at the Soil Mechanics Section of Imperial College. During this period she also worked (1990- 1991) at the Soil Mechanics Research Center of City University, London and as a visiting Lecturer (1989-1990 & 1992-1993) at the University of Rome "La Sapienza".
Since 1997 she has been a member of the academic unit of Soil Mechanics at NTU of Athens, Greece. Her primary research activities comprise laboratory element testing to examine the fundamental behaviour of soils and weak rocks. In particular the study of the strength and deformation characteristics and liquefaction potential for natural and model granular deposits under static and dynamic loading conditions, the inter-relationship between geotechnical and seismic characteristics of sediments and the

effect of sampling on the behaviour of stiff clays and sands. She has also developed a number of laboratory apparatus and techniques. She has led many research projects in these areas and has worked as a specialist consultant on numerous engineering projects worldwide.
She has published extensively on experimental soil mechanics and is the author and co-author of 70 publications in Journals and Conferences on the above subjects with over 200 citations. She has presented eleven invited lectures at various Academic Institutions. He has been on the editorial boards of two international journals and two technical committees of the International Society for Soil Mechanics and Geotechnical Engineering.
She has worked as a Consultant for the various design firms and contractors in the U.K.

SELECTED PUBLICATIONS: 19 mainly in Geotechnique, Geotechnical & Geoenvironmental Journal of ASCE, Canadian Geotechnical Journal, and Soils & Foundations etc.

19: David Mašín

Date of birth: 24.8.1978 Born in Mělník, Czech Republic

MSc. degree in engineering geology, Faculty of Science, Charles University, Prague: 1996 – 2001

M.Phil. degree in geotechnical engineering, City University, London.

12/2006 *Ph.D. degree* in engineering geology, Charles University, Prague

Since 03/2004: Lecturer –Numerical methods in geomechanics, Faculty of Science, Charles University, Prague

Since 01/2007 Senior lecturer, Charles University in Prague

David Mašín gained his professional experience at leading universities in the field. His research has been based at the University of Innsbruck (Prof. D. Kolymbas), Imperial College, London (Dr. M. Coop and Prof. D. Potts), City University, London (MPhil. thesis under the supervision of Dr. S. E. Stallebrass and Prof. J. H. Atkinson), Universite Joseph Fourier, Grenoble (Prof. G. Viggiani, Prof. C. Tamagnini, Prof. R. Chambon and Prof. J. Desrues), University of Dresden (Prof. I. Herle), University of Karlsruhe (Prof. G. Gudehus) and University of New South Wales, Sydney (Prof. N. Khalili). This international cooperation resulted in a number of publications in highly recognized international journals (see the list of references).

Here follows a list of research stays and sabbaticals:
- University of Innsbruck, Institut of Geotechnical and Tunnel Engineering. 1 month, 05/2001-06/2001
- Imperial College, London, UK. 1 month, 11/ 2001-12/2001.
- City University, London, UK. 1,5 years, 01/2001-06/2003.
- Universite Joseph Fourier, Grenoble, France. 4 months, 04/2004-07/2004
- University of Innsbruck, Institut of Geotechnical and Tunnel Engineering. 2 month, 10/2004-12/2004

- University of Karlsruhe, Institute of soil mechanics and rock mechanics, 2x1 week, 2005
- University of Dresden, Institute of Geotechnical Engineering, 1 month, 11/2005
- University of Sydney, University of Newcastle, Australia. 2 weeks, 11/2006
- University of Sydney, University of Newcastle, Australia. 1 month, 01/2010

Since 2005, D. Mašín has authored or co-authored a number of papers in international journals with IF (15papers published or accepted for publication; 2 other papers currently under review process). Moreover, D.Mašín has since 2005 been author or co-author of 5 papers in refereed local journals, 30 papers at international conferences and 11 papers at local conferences.

The research was supported through a number of research grants by the grant agencies within the Czech Republic. The following projects were solved by D. Mašín as a principal investigator: GAČR: 205/08/0732 (2008-2010; Development and evaluation of numerical methods for tunnelling in fine-grained soils), GAAV IAA200710605 (2006-2008; Development of hypoplastic models for nonstandard materials) and GAUK 331/B-GEO/PřF (2004-2006; Development and calibration of constitutive models for double-porosity soils). Moreover, D. Mašín was co-investigator and co-worker of 7 other research grants.
David Mašín is as a corresponding member a national representative in Technical Committees TC103 (Numerical Methods in Geomechanics), TC106 (Unsaturated Soils) and TC204 (Underground construction in soft ground) of the International Society for Soil Mechanics and Geotechnical Engineering. Since 2010 he is a secretary of the Czech Member Society of ISSMGE. Since 2009 he is a member of the panel P105 of the Grant Agency of the Czech Republic. D. Mašín promotes application of the advanced constitutive model in geotecnical practice. He is one of the founders and an administrator of the www.soilmodels.info web site, he also made available robust implementation of the hypoplastic models in different finite element codes (ABAQUS, Tochnog Professional, PLAXIS), see ww.natur.cuni.cz/uhigug/masin/plaxumat.

The research work by the D. Mašín has gained an international recognition through number of prizes and awards:
- *Shamsher Prakash Research Award in Geotechnical Engineering 2010* – awarded annually by the **S**hamsher Prakash foundation for outstanding independent contributions in Geotechnical Engineering and/or Geotechnical Earthquake Engineering. Awarded by David Mašín´s research on hypoplastic constitutive models.
- *International Association for Computer Methods and Advances in Geomechanics Junior Excellent Paper: Award 2008* - for the paper [Mašín, D. and Herle, I. (2005). State boundary surface of a hypoplastic model for clays. Computers and Geotechnics 32, No. 6, 400-410]

- *ALERT Geomaterials PhD prize 2007* - for the best PhD thesis in the field of soil, rock and concrete mechanics. Awarded annually by the Alliance of Laboratories in Europe for Research and Technology (ALERT).
- *Quido Záruba award 2007 –* Annual award by the Czech Geotechnical Society, for the best research work in the field of geotechnics and engineering geology.

- Dean of the Faculty of Science of Charles University in Prague award 2007 for the best PhD thesis.

List of selected publications: Publications in Geotechnique, Geotechnical & Geoenvironmental Engineering, ASCE, International Journal for Numerical and Analytical Methods in Geomechanics; Computers & Geotechnics. Soils & Foundations

20: DIPANJAN BASU

EDUCATION

Purdue University, West Lafayette, Indiana, U.S.A., 2006
Doctor of Philosophy (Geotechnical Engineering)
Master of Science in Civil Engineering (Geotechnical Engineering)
Doctoral Dissertation: Analysis of Laterally Loaded Piles in Layered Soil
Advisor: Prof. Rodrigo Salgado
Indian Institute of Technology (IIT), Kanpur, India, 2001
Master of Technology in Civil Engineering (Geotechnical Engineering)
Thesis: Soil Structure Interaction Analysis due to Moving Loads
Advisor: Prof. N. S. V. Kameswara Rao
Jadavpur University, Kolkata (Calcutta), India, 1997
Bachelor of Civil Engineering
First Class Honors

PROFESSIONAL APPOINTMENTS

University of Connecticut, Storrs, Connecticut, U.S.A.
Assistant Professor August 2008 − Present
Purdue University, West Lafayette, Indiana, U.S.A.
Postdoctoral Researcher January 2007 − August 2008
Graduate Research Assistant August 2006 − December 2006
PRF Fellow and Fugro Fellow August 2005 − July 2006
Graduate Research and Teaching Assistant August 2001 − July 2005
IIT, Kanpur, India

PUBLICATIONS: *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE *Proceedings of the ICE - Ground Improvement*, *Geotechnical and Geological Engineering*, *Geosynthetics International*, *Géotechnique* ,*International Journal for Numerical and Analytical Methods in Geomechanics*, *International Journal of Geomechanics*, *Geomechanics and Geoengineering: An International Journal*

21: Richard P. Ray

Associate Professor
Department of Civil and Environmental Engineering
University of South Carolina

Education

University of Michigan BSE 4/77 Civil Engineering
University of Michigan MSE 7/78 Civil Engineering
University of Michigan PhD 04/84 Civil Engineering

Research Interests

Soil Dynamics Foundation Investigation
Earthquake engineering Model verification
Laboratory testing of unsaturated soils Data Acquisition
Field studies of contaminated sites Numerical modelling

Refereed Publications: *Journal of Transportation Engineering, Journal of the Environmental Engineering Division*, ASCE, *Journal of Soil Contamination*, *Journal of the Geotechnical Engineering Division*, ASCE

Project Experience

Waterfront-River Structures-Retaining Walls

1. Anchored bulkhead and backfill drainage analysis, Pensacola Naval Air Station, Florida, USA
2. Anchored bulkhead analysis, alternative repairs, Harbour town, Hilton Head, South Carolina, USA
3. Excavation tieback wall monitoring and analysis, Texas Commerce Tower, Houston Texas, USA
4. Anchored bulkhead failure analysis, Houston Ship Channel, Houston, Texas, USA
5. Surcharge analysis, limestone storage terminal, Charleston South Carolina USA
6. Retaining wall remediation alternatives, Corpus Christi Naval Air Station, Texas USA

Dams and Locks

1. Evaluation of field performance, seven U-frame locks, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg Mississippi, USA
2. Theoretical development of alternative earth pressure behaviour models for U-frame locks, U.S. Army Corps of Engineers, Waterways Experiment Station, and Vicksburg Mississippi, USA
3. Lake Murray, Saluda Dam stability, seepage, and earthquake response analysis, Columbia, South Carolina, USA
4. Smithers Lake levee stability analysis, Houston Texas, USA
5. Sanders Creek Dam design, Columbia, South Carolina, USA

Earthquake Response Studies

1. Liquefaction potential evaluation at Beaufort Marine Air Base, U.S. Navy, Beaufort, South Carolina USA
2. Liquefaction potential evaluation at three highway bridges, South Carolina Highway Department, USA
3. Site response and liquefaction potential evaluation, Arthur Ravenal Bridge, Charleston, South Carolina, USA
4. Cyclic triaxial testing of treated and untreated soil for D. Elton, Auburn University

Slope Stability

1. Houston Ship Channel long-term stability analysis, Houston Texas USA.
2. Columbia Riverfront stability analysis, Columbia, South Carolina, USA
3. Stability of commercial development in mountainous regions, Blowing Rock, North Carolina, USA

Ground Water and Soil Contamination

1. Remediation of leaking underground storage tanks by soil vapour extraction, South Carolina, USA
2. Alternative remediation systems for surface runoff pollution, U.S. Army Training Base, Columbia South Carolina, USA
3. Measuring and modelling septic tank performance along coastal South Carolina, USA
4. Verification of unsaturated groundwater flow by full-scale testing. South Carolina, USA
5. Evaluation of water balance for vegetative landfill cover, mid-level radioactive waste storage, Savannah River National Laboratory, Aiken, South Carolina.

6. Assessment of radioactive transport and fate, Chernobyl, Ukraine *Lightweight Fill Performance*
1. Highway overpass embankment remediation, Pinnacle Casino Nevada, USA
2. Good Hope Hospital parking structure foundation stability analysis, Michigan, USA
3. U.S. Highway 6 expansion over box culverts, Florida, USA

Slabs and Foundations
1. Export fuels refinery foundations, earthwork, corrosion studies, Yanbu, Saudi Arabia
2. Long-term settlement predictions for nuclear waste containment tanks, Savannah River National Laboratory, Aiken, South Carolina.
3. Performance of thin slabs on grade, Myrtle Beach, South Carolina, USA
4. Performance of structural slabs and slabs on grade, Bridgestone-Firestone, Aiken, South Carolina

22: Prof. GHASSEM HABIBAGAHI

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Shiraz University
Shiraz, Iran
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A. EDUCATION

Jan.1987-Jan.1991
Ph.D. in Civil Engineering (Geotechnical Engineering Specialization) from Civil Engineering Department, Ecole Polytechnique, University of Montreal, Canada.

Sep. 1985- Jan. 1987
M. Eng. in Civil Engineering, (Geotechnical Engineering Specialization) from Civil Engineering Department, McGill University, Montreal, Canada.

Sep. 1975- Sep. 1982
B.Sc. in Civil Engineering, from Civil Engineering Department, Shiraz University, Shiraz Iran.

B. WORK EXPERIENCE

Jan. 2006 - Present
Professor, Department of Civil Engineering, Shiraz University, Iran.

Jan. 1998- Jan. 2006
Assoc. Professor, Department of Civil Engineering, Shiraz University, Iran.

Sep. 1991 - Jan.1998
Asst. Professor, Department of Civil Engineering, Shiraz University, Iran.

C. SABBATICAL LEAVE

July 1998- March 1999
On sabbatical leave at Department of Civil Engineering, University of Canterbury,
Christchurch, New Zealand.

D. RESEARCH INTERESTS:
Theoretical and experimental methods in unsaturated soil mechanics, Application of theory of fuzzy sets and intelligent systems in geotechnical engineering, Geoenvironmental Engineering, Geotechnical earthquake engineering.

E RECENT RESEARCH AND CONSULTING PROJECTS:

***** Design of foundations of Beshar Bridge in Yasuj, Iran
*Preliminary investigation of groundwater table of Jam gas refinery
*Phase II of project for lowering groundwater table in the site of Shiraz Oil Refinery.
*Investigation on the extent of groundwater contamination in the vicinity of Shiraz oil refinery.
*Determination of LNAPL thickness and tracing migration of the corresponding contamination plume over the groundwater beneath Shiraz oil refinery.
*Investigation on the settlement profile and soil behaviour beneath the foundation of 9600 ton elevated Ammonia Tank in Shiraz petrochemical complex.
*Application of intelligent systems to predict SWCC for unsaturated soils.
* Supervision of civil projects of the Shiraz City Hall, Engineering division, including roads, public buildings and bridges

G. SELECTED PUBLICATIONS: Collapsible soils, Partially saturated fills, Earth dams under seismic conditions, settlements in unsaturated compacted fill, Rock mass classification, Buried pipelines under seismic conditions, Torsion shear test, Neural & Neuro- fuzzy Networks, Simple shear of unsaturated soils, SWCC using genetic programming, Volume change measurement using image processing, Bearing capacity of unsaturated soils.

23: Dr. Dali Naidu Arnepalli

Dr. Arnepalli is a faculty member of Civil Engineering Department at Indian Institute of Technology Madras, since December 2008. Before joining IIT Madras he worked with Prof. R. Kerry Rowe research group at *Geo-Engineering Centre*, Queen's University, Canada where he served as a post-doctoral research fellow and associate research director for three years.

Dr. Arnepalli pursued bachelor degree in Civil Engineering, in the year 2000, from Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh, India; Master's and Doctoral degrees (in Geotechnical Engineering) from Indian Institute of Technology Bombay, in the year 2002 and 2006, respectively.

He is actively involving in pursuing teaching, research and developmental activities in quite diversified areas of geotechnical engineering, such as geosequestration of CO2 and green house gases, design of barrier and cover systems for containment of hazardous waste, long term performance of geosynthetic liners under realistic conditions, unsaturated behaviour of geomaterials and geosynthetic clay liners, advanced characterization of porous material (geomaterial) using Impedance spectrometer, thermal and electrical properties, geotechnical centrifuge modelling. He authored about 26 technical research publications of which 13 manuscripts were published in peer-reviewed national and international journals.

He was actively associated with development of modern *Environmental Geotechnology Laboratory* at department of Civil engineering, IIT Bombay and he was quite instrumental in establishing the unique laboratory and field testing facilities such as *Geosynthetic Liner Longevity Simulator (GLLS)* and *Composite Geosynthetic Liner Experimental Site* at Queen's University, Canada**.** Based on the technical skills and experience gained during his tenure at IIT Bombay and Queen's University, presently he is actively working on development of state-of-the-art ***Geoenvironmental Engineering Laboratory*** and ***Geotechnical Centrifuge Facility*** at Department of Civil Engineering, IIT Madras.

Dr. Arnepalli is also technical committee member of reputed international conferences such *12th IACMAG* and *6th International Congress on Environmental Geotechnics* and active reviewer for peer-reviewed international journals such as Geotechnical Testing Journal of ASTM, Journal of Testing and Evaluation of ASTM, Water Air & Soil Pollution, Fuel, Progress in Energy and Combustion Science, KSCE Journal of Civil Engineering, Indian Geotechnical Journal, Geotechnical and Geological Engineering, Journal of Geotechnical and Geoenvironmental Engineering, ASCE.

In addition to the teaching and research activities, Dr. Arnepalli has been quite actively associated with industrial and government organization as in-house instructor, course-coordinator and consultant. Further, Dr. Arnepalli is a life member of Indian Geotechnical Society, member of IACMAG, Member of International Society for Soil Mechanics and Geotechnical Engineering and Member of International Society of Geosynthetics

24: Prof. Akira Murakami

Prof. Akira Murakami received his BS (1978) at the Agricultural Engineering Department; MS (1980) at the Civil Engineering Department, and Dr. Agr. (1991) from Kyoto University (KU), respectively. In 1982, he became an Assistant Professor at the Agricultural Engineering Department of KU, and was promoted to an Associate Professor of KU in 1994. He moved to Okayama University with a promotion to Full Professor in 1999. After staying in Okayama for just 10 years, he moved back to a Full Professor of KU in 2009. He serves as the Vice President of the Japanese Geotechnical Society (JGS), the Board Member of the Japanese Society of Irrigation, Drainage and Rural Engineering (JSIDRE), and the International Association for Computer Methods and Advances in Geomechanics (IACMAG), and also is a core member of TC103 of ISSMGE and a member of the Multidisciplinary International Society on Inverse Problems in Science and Engineering. He had acted as the

Secretary of TC34 of ISSMGE for two terms and gave a General Report of Numerical Methods at 16ICSMGE held in Osaka. He is the recipient of the Japanese Society of Civil Engineering (JSCE) Paper Award (1996), the JSIDRE Sawada Prize (2007), the JGS Best Accomplishment Award (2008), the JSIDRE Best Paper Award (2010), and is a Fellow of JSCE. His research interests include the data assimilation, inverse problem, finite element methods, mesh free methods, and DEM in geomechanics.

25: Patrick Selvadurai

A.P.S. Selvadurai is professor in the Department of Civil Engineering and Applied Mechanics at the McGill University in Montreal. He obtained his PhD degree in Theoretical Mechanics from the University of Nottingham, UK for research in the area of Non-linear Elasticity and in 1986 the DSc in Theoretical Mechanics for research into Mathematical Modelling of Problems in Geomechanics and Elastomechanics. He was with Carleton University in Ottawa from 1975 until 1993, when he was invited by McGill University to become Chair of the Department of Civil Engineering and Applied Mechanics. He has held Visiting Professorships at the University of Nottingham, Universität Stuttgart, the Laboratoire 3S - Université Joseph Fourier in Grenoble, University of Canterbury (New Zealand), Hong Kong Polytechnic University, University of New South Wales (Sydney), Ecole Polytechnique Fédérale de Lausanne, and Technical University Delft. He has published over 230 research papers in archival journals devoted to applied mechanics, geomechanics and applied mathematics, transport in porous media and computational mechanics. He is the author or co-author of *Elastic Analysis of Soil- Foundation Interaction* (Elsevier, 1979), *Elasticity and Geomechanics*, *Partial Differential Equations in Mechanics Vols. 1&2* (Springer-Verlag, 2000) and *Plasticity and Geomechanics* (Cambridge University Press, 2002). He serves on the Editorial Boards of nine leading international journals devoted to *Geomechanics, Applied Mechanics, Computational Mechanics* and *Engineering Mathematics.* He is a Fellow of the Engineering Institute of Canada, the American Academy of Mechanics, the Canadian Society for Civil Engineering, the Institute for Mathematics and its Applications and the Canadian Academy of Engineering. In 2007 he was elected Fellow of the Royal Society of Canada.

26: Dr Pavlos Tyrologou

Dr Tyrologou graduated in Geology and Applied Geology from University of Glasgow, Scotland in 2001 (*with honours*). During his degree he developed an interest in geotechnics and environmental geology. To get an expertise in these particular fields he attended an MSc in Applied Environmental Geology from Cardiff University in Wales from where he graduated in 2002. To further pursue his interests he undertook research work at Imperial College, London. His work focused in redevelopment of contaminated land with the use of formulated recycled waste as geotechnical composite. As a result of this research he has received his Ph.D. at 2005.

Since then Dr Tyrologou worked as geotechnical and environmental engineer in a number of engineering companies on various projects, in order to get an insight practical experience and deploy his academic skills.

Currently, is working as a member within a team of independent consultant based in Athens, Greece. Together they provide expertise consultancy services in various local councils and communities. His interests and current projects are focused in landslides, highway construction and contaminated land among others.

27: Dr. Erdin Ibraim

Dr Erdin Ibraim was appointed as lecturer in the Department of Civil Engineering at the University of Bristol in 2000, joining the Geomechanics Group. Prior to the current appointment, Dr Ibraim held a two year Research Assistantship position at the Ecole Nationale des Travaux Publics (ENTPE) of Lyon, France. In the same establishment, Dr Ibraim was awarded his PhD in 1998 and his MSc in 1993.

Dr Erdin Ibraim's research activity focuses on developments of advanced laboratory geotechnical testing (including, among others, hollow cylindrical torsional apparatus, data acquisition and interpretation) and understanding of the complex deformation properties of geomaterials before failure (stiffness, anisotropy, time effects). His earlier research work in laboratory soil mechanics developed during his PhD research involved the triaxial investigation of the behaviour of sand from very small strains to static liquefaction phenomenon. This work also included the development of a new innovative local system of measurement of small axial strains using Lads. He is currently conducting research in collaboration with Imperial College London on micromechanics of seismic wave propagation in granular materials involving multiaxial testing using a Cubical Cell apparatus. Dr Erdin Ibraim is also performing extensive laboratory experimental characterisation of the behaviour of soil reinforced with discrete flexible inclusions, including constitutive modelling developments of these complex materials. He is also part of a joint Bristol/University of Oxford research team studying the lateral-pile-soil-interaction in seismically liquefiable soils.

As a Research Assistant at ENTPE in Lyon, Dr Ibraim has been interested in the seismic vulnerability assessment of existing buildings based on measurements of dynamic response before and during their demolition. This collaboration has recently been extended on the characterisation of the dynamic interaction problem between soil and long inclusions through a physical set-up system and shaking table testing at University of Bristol.

Over the last three years, Dr Ibraim has been actively involved in several scientific international collaborations on different research topics like micro/macro characterisation of the behaviour of an analogous materials (University J. Fourier, Grenoble, France), micromechanical modelling of granular assemblies (LCPC Nantes, France) and DEM developments for fibre reinforced soils (Nagoya Institute of Technology, Japan). He is a member

of the Editorial Board and Coordinator for Europe of the ISSMGE Bulletin and a member of the International Technical Committee TC101: Laboratory Stress Strength Testing of Geomaterials.

28: DR. JACQUES MONNET

Jacques Monnet contributes to the construction of the Civil Engineering teaching at Joseph Fourier University, where he was associated professor from 1987. He had his early education in INSA Lyon as Civil Engineer degree, and got his PhD degree in Claude-Bernard University in Lyon in 1983.

He is a fellow of Comité Français de Mécanique des Sols et de Géotechnique and International Society Soil Mechanics Geotechnical Engineering from 1971. He joins the Alert and Rnvo research group in 2001. He is the French delegate to the Technical Commitee TC16 (Ground Property Characterization from In-Situ Tests) from 2006.

He has published three patents and technical papers on constitutive relations for soil, on the inverse analysis of pressuremeter test, on the design of construction from pressuremeter results and in situ testing. He is referee for five international journals.

29: Dr. Werner Bilfinger

Dr. Werner Bilfinger had his civil engineering education at the University of São Paulo, 1987-1991. 1992 He joined Promon Engenharia, working with the design of dams and tunnels. In 1995 he started working in Vecttor Projetos, with Luiz Guilherme de Mello. In 1997 he became partner at Vecttor Projetos, where he works to present date, and also finished his MSc at the University of São Paulo. In 2002 he finished his PhD, also at the University of São Paulo. During his career, he worked mainly with applied soil mechanics in the fields of tunnelling, soil structure interaction, foundations, dams and embankments, slope stability and soft soils. His consulting activities are concentrated in South America, Africa and some cases in Europe, working for Owners, Contractors and Insurance Companies.

He was Brazilian representative in TC 23 of the ISSMGE (Limit State Design) from 2001 to 2005 and in TC 38 (Soil Structure Interaction) from 2006 to 2009. At present date he is Brazilian representative in TC 207 (Soil Structure Interaction). He is also active in the ITA (International Tunnelling Association), being Brazilian representative in WG 19 (Conventional Tunnelling). During his career, he published more than 40 papers in periodicals and conferences and attended several national and international conferences.

30: Professor Hideo SEKIGUCHI, Dr Eng

Visiting Professor, Graduate School of Science, Osaka City University, April 2010-
Professor emeritus, Kyoto University, April 2010-
E-mail: h.sekiguch@gmail.com

Sekiguchi has extensive research experience in soil mechanics, coastal sedimentary environment and coastal morphodynamics pertaining to beach and cliff erosion. His research efforts have been directed to looking at particulate sediments that undergo phase changes (liquefaction/fluidization) and assume loose moving boundaries. Most of the researches conducted are of an interdisciplinary nature, as exemplified by studies of wave-induced liquefaction, of subaqueous sediment gravity flows and of event deposits that include crevasse splays, paleo-scarps, overwashes and tsunami deposits.
Sekiguchi was a member of ISSMGE TC33 (2005-2009) on Geotechnics of Soil Erosion and served as Chair of the Organizing Committee for the 4th International Conference on Scour and Erosion (ICSE-4) held in Tokyo on 5-7 November 2008. He is a member of ISSMGE TC213 (2010-2013) on Soil Erosion.

Professional Affiliation

Japanese Geotechnical Society(JGS); Int. Soc. Soil Mech. Geotech. Engrg (ISSMGE); Japan Soc. of Civil Engrs; Sedimentological Soc. of Japan; American Geophysical Union.

31: Athanasios Platis

Education:

University of Patras (1972-1977): Dipl. Civil Engineer

University of California, Berkeley (1977-1980): M.Eng. in Geotechnical Engineering,

Key qualifications

1. Over the last 30 years he has been involved in most aspects of design and supervision of geotechnical engineering mostly in Greece and one year in the U.K. (Canary Wharf Development with Ove Arup and Partners). Among other things he has been extensively involved in the design and supervision of ground improvement mostly of soft cohesive soils, in many cases in marine projects (harbours).
2. Coordination of geotechnical investigations, geotechnical design and consulting, supervision, design review and expert advice for a wide variety of projects, such as: Telecommunication projects; Power plants and power distribution units; Highway projects; Harbour and port facilites ; Industrial buildings and facilities ; Public car parks and other deep basements; Restoration and construction of historic buildings; Sports facilities (Outdoor and indoor swimming pools and football stadiums); Stabilization of landslides; Damage assessment ; Sanitary landfills
3. Participation in the management of significant projects (highway, hydraulic, port facilities etc.)
4. Co-ordinator of a Working Group of the TCG on the compilation of a “Design Manual for the Design, Construction and Monitoring of Sanitary Landfills” between 1993-1995.

5. **Academic experience:**

- Research Assistant in the University of California at Berkeley under the supervision of Professors R. Goodman (Technical Geology and Rock Mechanics) and Chi Wang (Geophysics). Laboratory study of the electrical resistivity changes of the gouge material of tectonic faults preceding earthquakes, for earthquake forecasting.
- Study of the long-term stability of cuts in stiff, fissured clays and shales in Friars Formation, San Diego, California, under the supervision of Professor J.K. Mitchell of the University of California at Berkeley. The project was sponsored by the Geotechnical Firm WOODWARD-CLYDE CONSULTANTS, San Diego, California. The study included:
  (a) Finite element analysis of the stress field changes behind a slope after excavation.
  (b) Laboratory study of the influence of stress-path (obtained by (a)) on reconstituted samples.
  (c) The use of triaxial tests on precut specimens for determining the residual strength of stiff clays.

Publications: Cuts in stiff clays; large diameter bored piles; sanitary landfills; marine structures; PVD; stone columns; lateral pile load tests;

32: Jui-Pin Wang

Personal Details

Name : Jui-Pin Wang
Address : Department of Civil and Environmental Engineering
The Hong Kong University of Science and Technology
Email : jpwang@ust.hk

Academic Qualifications:

- Ph.D in Civil Engineering and Engineering Mechanics, Columbia University, 2007
- M. Phil in Civil Engineering and Engineering Mechanics, Columbia University, 2006
- Master of Science in Geology, National Taiwan University, 2001
- Bachelor of Science in Geology, National Taiwan University, 1999

Academic Position Held

- Assistant Professor, Dept. of Civil and Environmental Eng., HKUST, 2010-present

Professional Qualifications and Services

- Member, Hong Kong Geotechnical Society
- Member, Technical Committee, International Society for Soil Mechanics and Geotechnical Engineering (Hong Kong Representative)
  - TC210 – Dams
  - TC213 –Soil Erosion

Journal Publications: *J. Geotech. Geoenviron. Eng. ASCE; Geotextiles and Geomembranes;*

- *Journal of Engineering Mechanics*, ASCE; *Geosynthetics International; Engineering Geology*

33: Xianfeng Ma

Dr. Xianfeng Ma is an associate professor in Geotechnical Engineering Department at Tongji University. He is in charge of the geotechnical centrifuge facility and work as the secretary of the Key Laboratory of Ministry of Education in Geotechnical and Underground Engineering, which is affiliated to the same university. He got his B.S. and M.S. degree at Tongji University in the field of Geotechnical Engineering and did his research work for PhD in Japan on the seismic damage to underground structures mainly during the 1995 Kobe Earthquake. After he got his PhD in 2000, he worked as a research associate in the University of Tokushima, Japan for two years and worked in Geo-Research Institute in Osaka, Japan for one year as a researcher.

In 2003, he went back to China and was appointed a lecturer at Tongji University, and later an associate professor. His work in Tongji includes development of a 150g*ton geotechnical centrifuge, which comprise an in-flight shaking table available for seismic modelling tests for geotechnical structures, and the research on making local seismic design code for metro systems in Shanghai. He joined Schofield Centre at Department of Engineering in Cambridge University as an academic visitor from March 2008 to March 2009 and worked on centrifuge modelling on excavation. He is now appointed to be the executive group member from 2010 to 2013.

34: LEHTONEN, JOUKO Lennart

Education	Dr.Sc. (under construction, Aalto University), Lic.tech. Tampere University of Technology 2001 (geotechnics). M.Sc. (civ.eng.). Helsinki University of Technology 1978.
Languages	Finnish, English, Swedish
Tasks	2003- Principal Lecturer, Turku University of Applied Sciences 2002-2003 Jaakko Pöyry Group/Maa ja Vesi Oy, Turku office, Head of Geotechnical Engineering 1993-2001 Rautaruukki Group - Steel Piles, Product Manager (1993-1997), R&D Manager (1998-2001) 1986-1992 Suomen Teräspaalutus Oy (piling company), managing director 1978-1985 Raision Kirvestyö Ky, technical director 1977 Helsinki University of Technology, research assistant 1976-1977 Ins.tsto K. Öhman Ky, structural designer

Memberships

1. CEN/TC250/SC3/MET/K103 Piling, 1996...1997
2. CEN/TC288/WG9 Reinforced Soil, 1997...1999
3. The International Steering Committee on Micropiles, since 1999
4. ENV 1993-5 Eurocode 3, Part 5: Piling NTC-person (National Technical Contact) 2000…2002
5. CEN/TC189/WG1 Subcommittee on Geosynthetics used in Pavements and Overlays, member 2000
6. COST 348 (Reinforcement of pavements with steel meshes and geosynthesis, REIPAS) Management Committee, member 2001
7. ADSC/DFI Micropile Committee, member since 2002
8. Chairman of the International Society for Micropiles ISM 2006…2009
9. CEN/TC288/WG9 Soil Nailing, since 2008

International conference organisations

1. First Baltic piling day, seminar and exhibition supported by Deep
   Foundations Institute, member of the steering committee 1999
2. The 2nd International Workshop of Jacked Piles, member of the steering committee 1999
3. The 3rd International Workshop on Micropiles, IWM2000, chairman of the steering committee 1999…2000

Patents and references

- Totally 12 inventions and patents, mainly on piling and geotechnics
- Totally 100 scientific papers and conference presentations, mainly on piling and geotechnics

35: Dr. Petr Koudelka

Dr. Petr Koudelka is the Senior Fellow of the Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences and the Director of Petris, Ltd. – Research and Development in Civil Engineering (1990). He received his MSc. (1958), PhD. (1985) and DSc. (2001) degrees from the Czech Technical University in Prague for industrial structure design, for design and analysis and settlement research of metro tunnels on soft ground founded by the Inverse Pre-consolidation Method and for research into the physical and numerical modelling of earth pressure and the formulation of the General Lateral Pressure Theory, resp. His post-gradual study (1974-1976) at the University of Transport in Žilina related structure, technology and service of underground public railways and he received his Di. for design of the original prefabricated retaining system. He joined the Czech Chamber of Engineers

and Technicians (1993) and he is the Authorized Engineer for three branches: bridges and engineering structures, civil engineering, geotechnics.

He has published (2010) about 150 original assessed articles in scientific and technical periodicals and conference proceedings with full-text assessment on structural and geotechnical problems and researches. He is the co-author of three monographs on the Apriori Integration Method and slope stability and water wells. He has carried out and presented more than 90 research reports, expert assessments and lectures in scientific societies and Technical Universities.

He has been investigator or co-investigator (1998-2010) of 7 basic research projects on the earth pressure theory and design theories in geotechnics especially of the Limit State Design. He has been the high consulting engineer and high designer or high structure designer (Interproject, Metroproject, Petris) of a large number (about 500) of major and medium projects and expert's statements, including three stations and some tunnel sections and retaining structures of the Prague Metro, ironworks Vítkovice Steel and Podbrezova Steel, power plant Opatovice, agricultural and industrial silos, Czech Embassy in Tokyo, Czech Exposition in Osaka (involved), university and high school and similar others.

He has been member of the Czech National Committee of IS SMGE from 1983 to present time and member of the Czech Technical Standardization Committee 41 (Geotechnics) of the Czech Authority for Metrology and Standardization from 1988 to present time. He was member of the Examination Committee for PhD. degree at the Czech Technical University in Prague, member of TC 23 Limit State Design and he is member of TC 205 Limit State Design and TC 28 Underground Constructions in Soft Soils of IS SMGE.

His scientific activity concentrates on basic and applied research, physical and numerical modelling in the field of geotechnics and development of the original equipment for the research of earth pressure. He is interesting in the earth pressure and design theories, slope stability, foundations and retaining structures.

36: Dr. Gemmina Di Emidio

In 2003 **Gemmina Di Emidio** graduated as Ingegnere per l'Ambiente e il Territorio at Università Politecnica delle Marche, Italy (with the greatest distinction: 110/110). Since 2003 she has been working on Environmental Geotechnics, starting as scientific staff at Ghent University (UGent, Belgium), Research and Development Engineer at DEME NV (Antwerp, Belgium) and finally as Academic Assistant at UGent. From 2006 to 2010 she concluded her Doctoral Training and PhD in Civil Engineering. She is author of 3 peer-reviewed journal papers, one Pending Patent and over 20 publications in International Journals and Proceedings. She co-supervised or guided 10 Master theses and 2 Doctoral theses.
In 2006 she was selected by the Belgian Society for Soil Mechanics and Geotechnical Engineering as Delegate for Belgium, for the European Young Geotechnical Engineers' Conference in Zagreb. In 2008 she co-authored the paper delegate for Belgium, for the European Young Geotechnical Engineers' Conference in Gyor. In 2009 she was nominated by the ISSMGE as Member of the TC215 (Technical Committee on Environmental Geotechnics) for the period 2009-2013. In 2009 she was selected among researchers in the field of science and technology, by the

association Donne e Scienza for the project ARTence. In 2010 she was selected as Chair for the Sessions "Advances in Sustainable Barrier Materials" and "Advances in Sustainable Barrier Systems" for the Conference Geofrontiers 2011 (Dallas, Texas).
She is member of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and of the International Geosynthetics Society (IGS).
She is member of the 'Center of Excellence' among European Universities.

Specialties:

geosynthetic clay liners, quality control of compacted clay liners, polymer enhanced clays, crushability of sands with acoustic analysis, geotechnical and hydraulic characterization of acid tar, phosphogypsum, goethite, dredged materials, cement-bentonite cut-off walls, reuse of by-products for geotechnical and environmental applications.

37: Prof. ANAND J. PUPPALA

Distinguished Teaching Professor and Coordinator, Geotechnical Engineering
Director, Center for Geotechnical Engineering Research
Department of Civil Engineering, Box: 19308
The University of Texas at Arlington
Arlington, Texas 76019
Email: anand@uta.edu

RESEARCH AREAS

Expansive and Unsaturated Soils, Ground Modification (Shallow and Deep Soil Mixing Stabilization), Recycled Waste Materials, In Situ and Non-Destructive Soil Testing, Pavement Geotechnics and Site Characterization

EDUCATIONAL BACKGROUND

PhD Civil Engineering, May 1993, Louisiana State University (LSU), Baton Rouge, Louisiana.

MS Civil Engineering, January, 1987, Indian Institute of Technology (IIT), Madras, India.

BS Civil Engineering, May, 1985, Andhra University, Visakhapatnam, India.

PROFESSIONAL EXPERIENCE

The University of Texas at Arlington, Arlington, Texas.
Professor, September 2005 – Current
President, United States University Council on Geotechnical Education and Research (USUCGER)
Louisiana Transportation Research Centre, Baton Rouge, Louisiana.
Materials Research Engineer, 1993 - 1996
Louisiana State University, Baton Rouge, Louisiana.
Graduate Research Assistant and Graduate Teaching Assistant, 1988 - 1992

PUBLICATIONS

1: Book Chapters: "Combined Lime and Fiber Stabilization to Modify Expansive Soils." Chapters 24, 32, 33 Expansive Soils: Recent Advances in Characterization and Treatment, Taylor and Francis, Balkema; "Pavement Instrumentation Studies to Address Expansive Soils' Treatments." Invited Chapter, Special Edition, The 12th International Conference on Civil and Structural Engineering Computing.

2: Journals: **A**SCE Journal of Geotechnical and Geoenvironmental Engineering; ASTM Geotechnical Testing Journal ASCE Journal of Materials; Transportation Research Record ; Ground Improvement ; *ASCE, Journal of Infrastructures;* International Journal of Environment and Waste Management, Inderscience Publishers; Geotechnical Special Publication,

3: Keynote Lectures: 15

SERVICE

Visiting Professorships, King Saud University, Riyadh, Saudi Arabia and Southeast University, Nanjing, China; President, United States Universities Council on Geotechnical Engineering Research (USUCGER) Association for Computer Methods and Advances in Geomechanics, 1995-1997

EDITORSHIP

Editorial Board Membership Ground Improvement Journal; American Society for Testing and Materials (ASTM), Geotechnical Testing Journal; (2003 - Current); American Society of Civil Engineers (ASCE), Journal of Geotechnical and Geoenvironmental Engineering, Editorial Board Member (2006 - Current); American Society of Civil Engineers (ASCE), Journal of Materials, Editorial Board Member (2006 - Current); Geomechanics and Engineering, An International Journal, Quarterly, Techno Press, Korea, Editorial Board Member, Current.

Paper Review Activities (Reviewer of Manuscripts): ASCE Journal of Geotechnical and Geoenvironmental Engineering; ASCE Journal of Engineering Mechanics ASCE ; Journal of Infrastructure Construction ASCE Journal of Materials ; ASCE Journal of Computing ; ASCE Practicing Periodical on Hazardous Wastes ; ASTM Geotechnical Testing Journal; Canadian Geotechnical Journal ; Engineering Geology, Elsevier ; ASCE Special Publications; ASTM Special Technical Publications ; Journal of Transportation Research Board (1994-Current); ISSMGE Ground Improvement Journal

38: Fernando Saboya Albuquerque Junior

State University of Norte Fluminense Darcy Ribeiro – UENF
Department of Civil Engineering
Campos, Rio de Janeiro, Brazil
saboya@uenf.br

EDUCATION CREDENTIALS

UNDERGRADUATE
Civil Engineer from University of Pernambuco, Brazil, 1984

GRADUATE
M.Sc. from Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil, 1988
D.Sc. from Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, Brazil and the University of British Columbia, Canada (Sandwich Program), 1993

CAREER DEVELOPMENT
Has experience in Civil Engineering, focusing on rockfill dams, buried pipelines, numerical modeling, fuzzy sets and physical modeling using geotechnical centrifuge.
Has 5 distinguished awards and honors, including two for the best papers published in Geotecnia - Portuguese Geotechnical Society Journal. Was also recently honored as one of distinct scientist of Rio de Janeiro State (Awarded by Research Foundation of Rio de Janeiro State).
Has supervised 14 Master students, 3 Ph.D. Thesis and 4 Pos-Doc researches.
During 2003-2007 period was vice-rector of research and graduate program of the UENF.

REMARKS
Nowadays, is in charge of the Physical Modeling Laboratory at State University of Norte Fluminense (UENF), supervising researches on off-shore anchoring, buried pipelines, rockfill dams and suction piles. Is responsible for the developments and commissioning of the 100g x ton geotechnical centrifuge installed at UENF
Coordinator of the Civil Engineering Graduation Program at UENF.
Reviewer of some important geotechnical journals.
Full Professor of several Soil and Rock Mechanics disciplines at UENF.
Member of American Society of Civil Engineering, International Society for Soil Mechanical and Geotechnical Engineering, Brazilian Geotechnical Society, International Society of Rock Mechanic, International Commission of Large Dams.

RECENT RESEARCH PROJECT COORDINATOR
- Project for Commissioning the UENF Geotechnical Centrifuge
- Project for Geotechnical Issues on Petroleum and Gas.
- Project for Physical Modelling on Asphaltic Central Core Rockfill Dam. (2010)

39: Professor Jianhong Zhang

Professor Jianhong Zhang is an Associate Professor at the Department of Hydraulic Engineering, at Tsinghua University. She obtained her Ph. D in geotechnical engineering from Tsinghua University in 1996; and subsequently joined the Hong Kong University of Science and Technology as a Research Associate during 2000-2001. She is now the Vice Secretary-General of the Chinese Institution of Soil Mechanics and Geotechnical Engineering and also a member of ISSMGE TC 209 Offshore Geotechnics. Her research interests include offshore soil mechanics, migration of heavy metals in soils, stability analysis of natural slopes and earthen embankments, and centrifuge modelling technique. She has more than 90 publications, 36 papers published in international journals and international conferences. She has 14 years of experience in research, teaching and consulting.

40: Prof . JEONG, SANGSEOM

Professor / Chair
Department of Civil and Environmental Engineering
College of Engineering Yonsei University

E-MAIL : soj9081@yonsei.ac.kr
Professional Interests: Foundation Engineering, Soil Mechanics
Retaining Structures, In Situ Testing

EDUCATION:

- Ph.D., Geotechnical Engineering, Texas A&M University, Texas, USA, 1992. 8
- M.S., Geotechnical Engineering, University of California Davis, California, USA, 19 88. 12
- B. S., Civil Engineering, Yonsei University, Seoul, Korea, 1983. 2

EXPERIENCE:

Educational

- Professor, Department of Civil & Environmental Engineering, Yonsei University, 20 04-present.

SOCIETY MEMBERSHIPS:

International Committee ISSMGE – TC18 Deep Foundations, Core members (2005-present)

International Committee ISSMGE –ATC18 Mega Foundations Secretary (2007-present)

International Committee ISSMGE – TC33 Scour of Foundations (1999-2003)

AWARDS:

97.4 KSCE (Korean Society of Civil Engineering) Best paper award.

04.3 KGS (Korean Geotechnical Society) Best paper award.

05.5 KFSTS (Korean Federation of Science and Technology Societies) Best paper award.
10.3 KSCE(Korean Society of Civil Engineering) Academy award.
10.3 KGS(Korean Geotechnical Society) Academy award.
10.3 MLTM(Minister of Land, Transport and Maritime Affairs) Commendation award.

PUBLICATIONS: International Journal of Geo-Engineering; Journal of Rock Mechanics & Mining Sciences; Computers and Geotechnics; Journal of Geotechnical and Geoenvironmental Engineering, ASCE; Marine Georesources and Geotechnology; Engineering Geology; International Journal of Offshore and Polar Engineering; Geotechnique; Canadian Geotechnical Journal

41: Dr. Lurdes Pimenta

Civil Engineer, MSc, PhD

Personal Information

Name: Maria de Lurdes Pimenta Baptista

main Academic QUALIFICATIONS

PhD in Civil Engineering from *Instituto Superior Técnico, Universidade Técnica de Lisboa (IST/UTL)*, with the dissertation "Risk Approaches in Embankment Dams", 2009

Masters in Soil Mechanics with the dissertation "Seismic Analysis of Gravity Retaining Walls" from *Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (UNL/FCT)*, 1992

Degree in Civil Engineering from *Instituto Superior Técnico, Universidade Técnica de Lisboa (IST/UTL)*, 1988

PROFESSIONAL SUMARY

Director of AQUALOGUS Department of Geotechnical Works.

Professor of Soil Mechanics and Foundations, Parts I and II, at *Faculdade de Engenharia of the Universidade Católica Portuguesa (FE/UCP)*.

General Secretary of the Geotechnical Portuguese Society (four-year period 2008-2012).

Member of the Portuguese National Commission of Large Dams (CNPGB) and of the Working Group on Risk Analysis of CNPGB.

Senior Member and Expert in Geotechnics by the Portuguese Engineers Association.

KEY EXPERIENCE sumary

22 years of experience in Design and Technical Assistance, Modelling, Safety Analysis and Performance Analysis of Dams and other Geotechnical Works (shallow and deep foundations, retaining structures, underground structures and road and railway embankments). Her experience is intimately connected to large dam design, namely Friadão, Gouvães, Padroselos, Alto Tâmega e Daivões, Pias, Furta Galinhas, Brinches, Barras, Ervideira, Odelouca II, Ribeiradio, Minutos, Odelouca I, Sabugal, Abrilongo, Pinhosão and Rebordelo Dams in *Portugal*, Sidi-Hadjel, Cheliff, Djemaa-Aval, Douera and Koudiat-Acerdoune in *Algeria*, and Aracoiaba, Iraí, Candeia and Figueiredo in *Brazil*.

In the scope of Technical Assistance and Construction Consultancy, focus goes to Apartadura, S. Domingos, Abrilongo, Minutos, Sabugal and Odelouca II Dams in Portugal, and Iraí and Aracoiaba in Brazil.Concerning Risk Analysis and Safety Studies, Observation and Rehabilitation Works, has participated in the international consortium for studies of Inspection, Auscultation and Reinforcing of Algerian Dams (about 50), having prepared the final report "Safety Analysis of all Algerian Dams inspected" and the report of performance analysis and rehabilitation of the Harrezza and Sidi Abdelli Dams. In this field, has coordinated and actively participated in several training courses for the technical staff of “Agence Nationale des Barrages”, contributing, among others, with the following subjects: "Modelling and performance of embankment dams", "Dam safety analysis" and "The importance of monitoring activities in the evaluation of dam performance." It is also to highlight the Structural, Hydraulic and Operational Safety Studies of Maranhão, Furadouro, Gameiro, Monte da Rocha, Santa Clara and Roxo Dams in *Portugal*, Iraí and Jaburu I Dams in *Brazil*.

Under the Special Studies of Portuguese Dam Inspection, 2001 Arrangement was Project Director of a group of 60 dams. Inspection visits and preliminary risk analysis were done for all the dams. She has also prepared the first filling and observation plans for several dams, in Portugal and abroad.In addition to the work developed in the area of earth and rockfill dams, it should be highlight the dynamic analysis studies of the alluvial formations of the new bridge over the Tagus, in Carregado, the road-transport Design of the IC19, sections I and II, where she was responsible for the retaining structures, the Final Design of the peripheral containment curtain of the Santa Clara Monastery where she was the Project Director, the safety studies and rehabilitation projects of the Lisbon metro tunnel (Terreiro do Paço Station), participation in the design of the containment structures of Bulhão, Lima and Marquês Stations of the Oporto Metro, and the Final Design of the Rabat-Tanger Motorway (Morocco), responsible for the geotechnical studies.

She is author or co-author of many scientific papers and reports, essentially concerning earth and rockfill dams modeling, design and construction and, recently, to risk analysis and risk management of dams.

42: Dr. Chee-Ming Chan

Dr. **Chee-Ming Chan**, is a Senior Lecturer at the Faculty of Civil and Environmental Engineering, Universiti Tun Hussein Onn Malaysia, and also a Research Fellow of the Research Centre for Soft Soils (RECESS) based in the same University. Currentlyhe is on a postdoctoral research fellowship at the Port and Airport Research Institute (PARI) in Yokosuka, Japan. He studied for a Diploma in Civil Engineering at Politeknik Port Dickson, Malaysia (1st. class Diploma, 1998), followed by a Bachelor of Science in Civil Engineering at ITTHO-UTM, Malaysia (1st. class Honours, 2001), and PhD in Geotechnical Engineering at the University of Sheffield, England (2006). His research interest falls under the umbrella of 'sustainable geotechinics', with focus on soil stabilization and solidification. The projects he is involved is in range across the Civil Engineering fields of study, such as ground improvement with locally sourced materials, development of grey water filter material from earth-based wastes, remedial measures for road embankment failures on peat soils, production of soil-based building materials for sustainable development, automated agricultural biotope with soil conditioning, etc. Apart from research, he is also involved in undergraduate and postgraduateteaching , as well as supervising research studies.