KENICHI SOGA PhD FREng FICE

Chancellor's Professor University of California, Berkeley Department of Civil and Environmental Engineering 447 Davis Hall Berkeley, California 94720-1710 USA e-mail:soga@berkeley.edu

Personal Background

| Place of Birth | Suffern, NY, USA (US Citizen) | | | |
|-------------------|--|--|--|--|
| Education | Rokko Primary School, Kobe University Secondary School, Kobe High School, all in Kob | | | |
| Employment | | | | |
| 2016 – present | Chancellor's Professor | | | |
| | University of California-Berkeley, Department of Civil and Environmental Engineering | | | |
| 2007 - 2016 | Professor of Civil Engineering | | | |
| | University of Cambridge, Department of Engineering, Cambridge, UK | | | |
| 1995 – 2016 | Fellow | | | |
| | Churchill College, Cambridge, UK | | | |
| 2003 - 2007 | Reader in Geomechanics | | | |
| | University of Cambridge, Department of Engineering, Cambridge, UK | | | |
| 2000 - 2003 | University Senior Lecturer | | | |
| | University of Cambridge, Department of Engineering, Cambridge, UK | | | |
| 1994 - 2000 | University Lecturer | | | |
| | University of Cambridge, Department of Engineering, Cambridge, UK | | | |
| 1994 | Post-Doctoral Research Fellow | | | |
| | University of California-Berkeley, Research Advisor : Professor Jonathan D. Bray | | | |
| 1993 | Graduate Student Instructor | | | |
| | University of California-Berkeley | | | |
| 1991 - 1994 | Graduate Research Assistant | | | |
| | University of California-Berkeley, Research Advisor : Professor James K. Mitchell | | | |
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<u>Higher Education/Degree</u>

| 1989-1994 | University of California-Berkeley, USA |
|-----------|---|
| | Ph.D. in Civil Engineering, |
| | Major : Geotechnical Engineering |
| | Minors : Mechanics of Solids and Landscape Architecture |
| | Dissertation "Mechanical behavior and constitutive modelling of natural structured soils" |
| | Research Advisor : Professor James K. Mitchell |
| 1987-1989 | Kyoto University, Japan |
| | Master of Engineering, Geotechnical Engineering emphasis |
| | Dissertation "Long-term consolidation behavior of Osaka diluvial clay" |
| 1983-1987 | Kyoto University, Japan |
| | Bachelor of Science (Civil Engineering) |

Professional Affiliations

- Fellow, Royal Academy of Engineering, UK
- Fellow, Institution of Civil Engineers, UK
- Member, American Society of Civil Engineers, USA
- Member, Japan Society of Civil Engineers, Japan
- Member, British Geotechnical Association, UK.
- Member, Japanese Geotechnical Society, Japan

Spinout companies

- Wisen Innovation, 2010, Wireless Sensor Network, Yan Wu

- 8Power, 2016, Energy Harvesting and MEMS strain device, Yu Jia, Ashwin Seshia and Jize Yan
- Utterberry, 2015, Wireless Sensor Network, Heba Bevan
- CSattAR, 2016, Digital Image Correlation, Mehdi Alhaddad

Awards/Honors

- 1989 Murata Overseas Scholarship 2002 Jennings Award (The South African Institution of Civil Engineers) 2002 Schofield Award (International Journal of Physical Modelling in Geotechnics) 2006 George Stephenson Medal (Institution of Civil Engineers) 2006 Jennings Award (The South African Institution of Civil Engineers) 2007 Geotechnique Lecture, British Geotechnical Association 2007 Walter L. Huber Civil Engineering Research Prize (American Society of Civil Engineers) Russell Crampton Prize (Institution of Civil Engineers) 2007 Fellow, Institution of Civil Engineers, UK 2007 Telford Gold Medal (Institution of Civil Engineers) 2010 2012 Fellow, School of Engineering, University of Tokyo 2012 Best Lecturer, Department of Engineering, University of Cambridge 2013 Best paper award, the Thirteenth IAPR International Conference on Machine Vision Applications 2013 Fellow, Royal Academy of Engineering, UK 2013 Croce Lecture, Italian Geotechnical Association Best paper award, The 5th International Forum on Opto-electronic Sensor-based Monitoring in 2014 Geo-engineering, Nanjing, China 2015 Osterberg Lecture, Northwestern University Russell Crampton Prize (Institution of Civil Engineers) 2015 2015 Skempton Lecture, European Conference on Soil Mechanics and Geotechnical Engineering 2015 Best paper award, 14th International Conference of the International Building Performance Simulation Association 2016 9th Lumb Lecture, Hong Kong Engineering Institute-University of Hong Kong 2016 International Collaboration Award, Japan Society of Civil Engineers
- 2017 15th Jennings Memorial Lecture, South African Geotechnical Society
- 2017 Schiffman Lecture, Cornell University

Invited Visiting Appointments

- 1997 Research fellow, COPPE, Federal University of Rio de Janeiro (May, two weeks)
- 2001 Visiting associate professor, Colorado School of Mines (January-September)
- 2001 Research fellow, Chiba Institute of Technology (March, one week)
- 2005 Lecturer, Hokkaido University (February, one week)
- 2005 Research fellow, City University of Hong Kong (March, one week)
- 2006 Lecturer, Universitat Politecnica de Catalunya (July, two weeks)
- 2007 Lecturer, Hokkaido University, Japan (January, two weeks)
- 2007 Lecturer, Tokyo Institute of Technology (February, one week)
- 2008 Research fellow, National Institute of Advanced Industrial Science and Technology (July, two weeks)
- 2009 Thai Government Visiting Professorship (January, two weeks)
- 2009 JSPS fellowship (March-May)
- 2009 Research fellow, Deltares, the Netherlands (June-July)
- 2010 Research fellow, EPFL, Switzerland (July)
- 2010 Kwang-Hua Visiting Professor, Tongji University, China
- 2010 Visiting Professor, University Teknologi Malaysia, Malaysia (December)
- 2011 Visiting Professor, Sapienza Università di Roma (August, December)
- 2012 Visiting researcher, Tongji University, China, Shanghai Magnolia Grant (June)
- 2012 Visiting Professor, University Teknologi Malaysia, Malaysia (June)
- 2013 Guest Professor, Zhejiang University, China
- 2014 Honorary Professor, University of Hong Kong
- 2014 Guest Professor, Nanjing University, China
- 2015 Distinguished YNU Professor, Yokohama National University, Japan
- 2015 Guest Professor, Southeast University, China

Keynote/Theme lectures

| | Keynote/ I neme lectures | | | | | | |
|------|--------------------------|--|--|--|--|--|--|
| | Keynote | International Conference on Physical Modelling in Geotechnics, Hong Kong | | | | | |
| 2007 | Lecture | Geotechnique Lecture, British Geotechnical Association, London | | | | | |
| 2010 | Plenary | 6ICEG 2010 6th International Congress on Environmental Geotechnics, India | | | | | |
| 2010 | Keynote | Paymacotas Workshop on Tunnel Engineering-Instrumentation in Tunnels and Excavations, | | | | | |
| | • | Barcelona | | | | | |
| 2010 | Keynote | International Symposium on Geomechanics and Geotechnics: From Micro to Macro (IS-Shanghai | | | | | |
| 2010 | V | 2010), Shanghai | | | | | |
| 2010 | Keynote | 1st International Conference on Information Technology in Geo-Engineering (ICITG-Shanghai 2010), Shanghai | | | | | |
| 2011 | Keynote | EPSRC Energy Harvesting Network Workshop (Structural Monitoring) | | | | | |
| | Keynote | LimesNet Research Conference 2012, Bristol | | | | | |
| | Keynote | International Workshop on ICT in Geo-Engineering, Kyoto | | | | | |
| 2012 | Keynote | EC MEMSCON Workshop - Towards Intelligent Civil Infrastructure, Athens | | | | | |
| | Keynote | GEOTEC HANOI 2013, Hanoi | | | | | |
| 2013 | Keynote | Telford workshop on wireless sensor network, Aberdeen | | | | | |
| | Keynote | International Workshop on "Thermoactive Geotechnical Systems for Near-Surface Geothermal | | | | | |
| | - | Energy: from research to practice", Lausanne | | | | | |
| 2013 | Keynote | Géotechnique Symposium in Print on "Bio- and Chemo-Mechanical Processes in Geotechnical | | | | | |
| | - | Engineering", London | | | | | |
| 2013 | Lecture | Croce Lecture, Italian Geotechnical Association, Rome | | | | | |
| 2014 | Keynote | GeoShanghai International Conference 2014, Shanghai | | | | | |
| 2014 | Keynote | The Second International Smart Infrastructure Symposium, Osaka | | | | | |
| 2014 | Keynote | The 5th International Forum on Opto-electronic Sensor-based Monitoring in Geo-engineering (5th OSMG-2014), Nanjing | | | | | |
| 2014 | Theme | The 7th International Congress on Environmental Geotechnics, Melbourne | | | | | |
| | Lecture | Osterberg Lecture, Northwestern University | | | | | |
| | Keynote | Ground Engineering Instrumentation and Monitoring, London | | | | | |
| | Keynote | 2015 Korean Geotechnical Society National Convention, Seoul | | | | | |
| | Keynote | Workshop on Sensing and Information for Civil Infrastructure, Japanese Society of Civil Engineers | | | | | |
| | Keynote | NERC KE Workshop (remote monitoring of geotechnical assets), British Geological Survey | | | | | |
| | Keynote | 6th International Conference on Advances in Experimental Structural Engineering (6AESE) and the | | | | | |
| 2015 | Reynote | 11th International Workshop on Advanced Smart Materials and Smart Structures Technology | | | | | |
| | | (11ANCRISST), University of Illinois- Urbana Champaign | | | | | |
| 2015 | Keynote | XVI European Conference on Soil Mechanics and Geotechnical Engineering, Edinburgh | | | | | |
| | Keynote | The 1 st International Conference on Geo-Energy and Geo-Environment (GeGe2015), Hong Kong | | | | | |
| | Keynote | 1st IMEKO TC-4 International Workshop on Metrology for Geotechnics, Benevento, Italy | | | | | |
| | Keynote | The 1st International Conference on Energy Geotechnics ICEGT 2016, Kiel, Germany | | | | | |
| | Lecture | 9th Lumb Lecture, Hong Kong Engineering Institute-University of Hong Kong | | | | | |
| | Keynote | MPM 2017 – The First International Conference on the Material Point Method for Modelling Large | | | | | |
| 2017 | Reynote | Deformation and Soil-Water-Structure Interaction | | | | | |
| 2017 | Keynote | EURO:TUN 2017, Innsbruck, Austria | | | | | |
| | Lecture | 15th Jennings Memorial Lecture, South African Geotechnical Society | | | | | |
| | Lecture | Schiffman Lecture, Cornell University | | | | | |
| | Keynote | 2017 Taiwan bi-annual geotechnical engineering conference | | | | | |
| 2017 | reynou | 2017 Tarwan or-annual geoteennear engineering conference | | | | | |

<u>Editor</u>

- Editor-in-Chief, ICE-Proceedings Smart Infrastructure and Construction, ICE Publishing (2016-)
- *Editorial Board Member*, Geomechanics and Geoengineering, An International Journal, Taylor and Francis (2005-), GeoRisk, Taylor and Francis (2006-), Geomechanics and Engineering, Techno-Press (2009-), Transportation Infrastructure Geotechnology (2014-), Geomechanics for Energy and the Environment, Elsevier (2015-), Underground Space, Elsevier (2015-), SpringerBriefs in Petroleum Geoscience and Engineering, Springer (2016-), Rivista Italiana di Geotecnica (2015-), Journal of Hydrodynamics (2016-), Sustainable and Resilient Infrastructure (2016-)
- Past Editorial Board Member, Journal of Geotechnical and Geoenvironmental Engineering, American Society of Civil Engineers (2001-2009), Soils and Foundations, Japanese Geotechnical Society (2001-2005), Geotechnique, Institution of Civil Engineers (2003-2005), Vadose Zone Journal, Soil Science Society of America (2006-2007), Computers and Geotechnics, Elsevier (2010-2016)

Professional Activities (since 2010)

- Associate, Geotechnical Consulting Group, London (2015-present)
- Executive Member, Secretary, Technical Oversight Committee of ISSMGE (2010-present)
- *Vice-Chair*, International Technical Committee 308 on Energy Geotechnics, The International Society of Soil Mechanics and Geotechnical Engineering (2013-present)
- Secretary, International Technical Committee 105 on Macro and Micro Geomechanics, The International Society of Soil Mechanics and Geotechnical Engineering (2005-present)
- Executive Member, Cambridge Centre for Smart Infrastructure and Construction (2011-2016)
- Member, UK Engineering and Physical Sciences Research Council (EPSRC) Peer Review College (2002-present)
- Advisory Board Member, International Press-In Association (2007-present)
- Member, Research & Secondments Committee, Royal Academy of Engineering (2015-2016)
- Board Member, British Geotechnical Association (2013-2016)
- President, UK section of the Japan Society of Civil Engineers (2005-2016)
- Steering board member, EPSRC Energy harvesting network (2009-2014)

Reviewing

- Reviewed papers for Geotechnique, ICE Geotechnical Engineering Journal, ASCE Geotechnical and Geoenvironmental Journal, ASTM Geotechnical Testing Journal, Canadian Geotechnical Journal, Journal of Contaminant Hydrology, AGU Water Resources Research, Granular Matters, European Journal of Mechanics - A/Solids, Journal of Geophysical Research, Journal of Hazardous Materials, International Journal of Physical Modeling in Geotechnics, Advances in Water Resources, Geomechanics and Engineering, Geomechanics and Geoengineering, Mechanics of Materials and others
- Reviewed proposals for research councils (EPSRC, US NSF and international).
- External Ph.D. examiner Imperial College, University of Bristol, University of Sheffield, University College London, University of Montpellier, Loughborough University, University of Brighton, Ecole Polytechnique Fédérale de Lausanne, University of Southampton, University of Birmingham, Delft University of Technology, National University of Singapore, University Teknologi Malaysia, University of Padova, Hong Kong Polytechnic University, Universidad Politecnica de Catalunya.
- *External Examiner*, University of Southampton, Civil Engineering BEng/MEng/MSc programme (2009-2013)
- External Examiner, University of Hong Kong, Civil Engineering, MSc programme (2011-2015)
- Panel member, Review of Department of Engineering, University of Oxford (2015)
- External Review Board Member, Graduate School of Frontier Sciences, University of Tokyo (2016-present)
- Advisory Board Member, Tokyo Institute of Technology (2009-present)
- Review Panel ERC for Bio-mediated and Bio-inspired Geotechnics (CBBG), National Science Foundation (2016)

Teaching Activities

Current (University of California-Berkeley)

GraduateCE272 Numerical Modelling in GeomechanicsGraduateCE270 Advanced Geotechnics

Past (University of Cambridge)

| Tasi (Oniversity of Cambridge) | | | | |
|--------------------------------|--|--|--|--|
| 1 st year | Exposition | | | |
| 2 nd year | Seepage Experiment | | | |
| 2 nd year | Civil Engineering – Design and Construction of Underground Space | | | |
| 3 rd year | 3D1 Geotechnical Engineering I | | | |
| 3 rd year | 3D2 Geotechnical Engineering II | | | |
| 3 rd year | 3D6 Environmental Geotechnics | | | |
| 3 rd year | 3D7 Finite Element Methods | | | |
| 3 rd year | Soil Mechanics – Consolidation and Shear Experiment | | | |
| 3 rd year | Quay Wall Design Project | | | |
| 3 rd year | Civil Engineering Project - Engineering Geology | | | |
| 4 th year | Foundation Engineering | | | |
| 4 th year | Ground Engineering, Soil improvement | | | |
| 4 th year | Ground Engineering, Grouting | | | |
| 4 th year | Contaminated Land and Waste Containment | | | |
| Postgraduate | 5R7 Advanced Numerical Methods in Geomechanics | | | |
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Administrative Activities

University of Cambridge Head of the Geotechnical and Environmental Engineering Group (2013-2015) Deputy Director for Research and Industrial Liaison, Cambridgsense CDT (2014-2015) Executive committee member, Future Infrastructure and Built Environment CDT (2014-2015) Executive committee member, Integrated Photonic and Electronic Systems (IPES) (2010-2015) Director of Studies in Engineering, Churchill College (1997 – 2013) Director of Studies in Engineering, St Edmunds College (2003 – 2010) Chairman of the Language Unit Committee, Engineering Department (2004-2008, 2010-2011) 4th year MEng Group Coordinator (2005-2008) Member of the College Council of Churchill College (1998/1999) 4th year M.Eng. Projects Coordinator (2001-2003)

University of California, Berkeley Member, Faculty Search Committee (2016)

Research Supervisions

Ph.D.

University of Cambridge

- 1. L.J. Potter (1996) Contaminant migration through consolidating soils (Co-supervisor)
- 2. M.B. Carrier (2000) Dielectric measurements over a wide frequency range in E-grade kaolin
- 3. C. Kechavarzi (2001) Physical modelling of immiscible multiphase flow porous media
- 4. S.K.A. Au (2001) Fundamental study of compensation grouting in clay
- 5. H. Coumoulos (2002) Centrifuge and numerical modelling of dense non-aqueous phase contaminants migration
- 6. S. Yimsiri (2002) Pre-failure deformation characteristics of soils: anisotropy and soil fabric.
- 7. S. Ratnam (2002) Development of a novel self-boring permeability measurement technique
- 8. E.T. Bowman (2002) Creep and ageing of dense granular materials
- 9. W.A. Waduge (2004) Evaluation of efficiency of air sparging in NAPL contaminated heterogeneous system
- 10. I. Kulasooriya (2005) Remediation of Dense Non-aqueous phase liquids using surfactant flushing; Mass flux approach
- 11. J.W.E. Page (2005) A mass flux and partitioning tracer concept for DNAPL source zone characterisation
- 12. T.E.B. Vorster (2005) The Effects of tunnelling on buried pipes (Co-supervisor)
- 13. J. Wongsaroj (2006) Three-dimensional finite element analysis of short and long-term ground response to open face tunnelling in stiff clay
- 14. T.P. Cheong (2006) Numerical modeling of soil-pipeline interaction
- 15. H. Ji (2008) Physical modeling of jet grouting processes
- 16. K. Gafar (2008) Compensation Grouting in Sand
- 17. M.Y.A. Ng (2008) Modelling hydraulic fracturing in cement bentonite geomaterials
- 18. H. Mohamad (2008) Distributed optical fibre strain sensing of geotechnical structures
- 19. P. Nikolopoulos (2008) Non-aqueous phase liquid pollutant in natural soils and its long-term risk after remediation
- 20. K. Joshi (2009) Long-term Engineering Performance and In-Situ Assessment of Cement-Bentonite Cut-off Walls
- 21. A. Y. Leung (2010) Foundation optimization and its application to pile reuse
- 22. D. Robert (2010) Soil-pipeline interaction in unsaturated soils
- 23. R. Laver (2010) Long-term behaviour of twin-tunnels in London Clay
- 24. L. Liu (2011) Disturbance Analysis of the Self Boring Pressuremeter Tests
- 25. A. Al Qabany (2011) Microbial Carbonate Precipitation in Soils
- 26. K. Chaiyasarn (2011) Detection and monitoring of damage for tunnel inspection based on computer vision
- 27. K. Janmonta (2011) Monitoring of ground movements using optical fibres
- 28. C.S. Gue (2012) Submarine landslide flows simulation through centrifuge modelling
- 29. L. Hughes (2012) Effects of alignment on CO_2 emissions from the construction and use phases of a highway
- 30. K. Ellison (2012) Constitutive modelling of a heavily overconsolidated clay
- 31. S. Uchida (2012) Numerical investigation of geomechanical behaviour of hydrate-bearing sediments
- 32 S. Bandara (2013) Material point method to simulate large deformation problems in fluid-saturated granular medium
- 33. D. Garber (2013) Ground source heat pump system models in an integrated building and ground energy simulation environment
- 34. Y. Ouyang (2013) Geotechnical behaviour of energy piles

Curriculum Vitae

- 35. T. Schwamb (2014) Performance monitoring and numerical modelling of a deep circular excavation
- 36. Z. Li (2014) Long-term behaviour of cast-iron tunnel cross passage in London clay
- 37. K. Kumar (2014) Multi-scale multiphase modelling of granular flows
- 38. E. Xu (2014) Numerical analysis of wellbore behaviour during methane gas recovery from hydrate bearing sediments
- 39. Y. Rui (2014) Finite element modelling of thermal piles and walls
- 40. O. Dawoud (2015) The applicability of microbially induced calcite precipitation (MICP) for soil treatment
- 41. Y. Zheng (2015) Application Potential of Shallow Geothermal Energy at City Scale
- 42. M. Zhou (2015) Geomechanical study of hydrate-bearing sediments with turbidite formation and hydrate heterogeneity
- 43. Q. He (2015) Thermal performance of energy geotechnical structures
- 44. N. Jiang (2016) Microbially Induced Calcite Precipitation for the Mitigation of Soil Internal Erosion and Sand Production
- 45. J. Fern (2016) Constitutive Modelling of Unsaturated Sand and its Application to Large Deformation Modelling
- 46. M. Alhaddad (2016) Photogrammetric monitoring of cast iron tunnels and applicability of empirical methods for damage
- 47. M. Wilcock (2016) The Behaviour of Existing Segmental Cast Iron Tunnel Linings Subject to Ground Movement from New Tunnelling
- 48. Y. Yu (2016) Signal Processing of Brillouin Distributed Optical Fibre Sensors
- 49. T. Kobayashi (on-going) Submarine landslide modeling
- 50. M. Nakashima (on-going) Performance of sprayed concrete lined tunnel
- 51. H. Bevan (on-going) Ultra low power wireless sensor network system
- 52. J. Wong (on-going) Hydraulic fracture modelling
- 53. X. Lu (on-going) City scale modelling of low grade geothermal energy
- 54. Y. Mei (on-going) Distributed fibre optic strain sensing for geotechnical application
- 55. B. Li (on-going) Dynamic fibre optics strain measurement
- 56. L. Luo (on-going) BOTDR based strain sensing
- 57. G. Casey (on-going) Whole life carbon assessment of infrastructure
- 58. S. Kularathna (on-going) Wellbore integrity modelling
- 59. T. Feng (on-going) Wireless Sensor Monitoring of civil engineering infrastructure
- 60. H. Mallikarachchi (on-going) Subsea soil-pipeline interaction
- 61. B. Zhao (on-going) City-scale modelling of transport infrastructure maintenance
- 62. V. Di Murro (on-going) Long-term performance of CERN tunnel
- 63. A. Murphy (on-going) Sand production in wellbores and its prevention
- 64. Y. Wang (on-going) Bacteria transport in porous material
- 65. H. Luo (on-going) Methane Hydrate Modelling

University of California, Berkeley

66. E. Y. Setiasabda (on-going), Material Point Method

M.Phil&M.Sc.

University of Cambridge

- 1. M.T. Cheong (2003) Influence of underground excavation on compaction grouting in soft clay
- 2. T.P. Cheong (2003) Numerical analysis of 3D soil-pipeline interaction
- 3. K. Gafar (2004) Modelling of soil-grout interaction
- 4. H. Mori (2008) Numerical modeling of river levee failures
- 5. S. Uchida (2008) Soil fractures around wellbores
- 6. L. Cheung (2008) Fiber optic strain measurement for monitoring tunnel lining movements
- 7. W. Au (2010) An experimental study of compensation grouting in silt
- 8. H. Luo (2014) Experimental and numerical investigation on fresh cement deformation behavior
- 9. K. Suda (2016) Geomechanical study of shallow water carbonate formation

University of California, Berkeley

10. M. Ali Alghannam (on-going) Hydraulic fracture modelling using Lattice Element Method

Research Associates

University of Cambridge

1. Dr. M.F. Bransby, Effect of pore fluid viscosity on stiffness and damping of sands, 1/96-6/96

- 2. Dr. E. Ellis, Effect of pore fluid viscosity on liquefaction of sands, 1/97-6/97
- 3. Dr. G.R. Dasari, Numerical implementation of advanced soil models into ABAQUS and modelling of soil-pipeline interaction problems, 4/97-3/00
- 4. Dr. M.W. Gui, Development of instrumented drilling system, 10/97-9/99
- 5. Dr. K. Komiya, Development of finite element program to simulate shield tunnelling process, 5/98-3/99
- 6. Dr. S. Gourvenec, co-superviser, Investigation of soil condition around an old London Underground tunnel, 4/98-3/00
- 7. Dr. B.C. Hawlader, Development of hollow cylinder torsional shear system and constitutive modelling of natural soils, 11/98 – 9/00
- 8. Dr. M.R. Jafari, Experimental investigation of compensation grouting, 9/98-1/01
- 9. Dr. C. Kechavarzi, Soil testing using a hollow cylinder torsional shear apparatus, 3/01 9/01, 3/03-9/04
- 10. Dr. S. Ratnam, Assessment and monitoring of ageing infrastructure, 6/02-11/02
- 11. Dr. E.T. Bowman, Royal Academy of Engineering Research Fellow, Debris flows, 7/02-8/05
- 12. Dr. S.W. Jacobsz, Development of wireless sensor network system to monitor tunnel deformation, 5/03-9/03
- 13. Dr. A. Spasojevic, Numerical modelling of soil liquefaction, 4/03-5/05
- 14. Dr. P. Bennett, Fibre optic strain measurements, 4/04-9/09
- 15. Dr. A. Klar, Gashydrate modelling, 4/05-3/06
- 16. Dr J. Ransley, Micro-Electro-Mechanical Sensors and Power Harvesting, 10/06 09/07
- 17. Dr Binod Amatya, Smart Foundations, 12/06 05/09
- 18. Dr Jize Yan, Micro-Electro-Mechanical Sensors and Power Harvesting, 03/08 12/15
- 19. Dr Dedy Loebis, Power harvesting, 07/07 12/08
- 20. Dr Guoliang Ye, Power harvesting, 03/09 03/11
- 21. Dr. Mohammed Elshafie, Fibre optics monitoring, 07/09-07/11
- 22. Dr Sarfraz Nawaz, Cambridge Centre for Smart Infrastructure and Construction, 01/12-10/15
- 22. Dr Loizos Pelecanos, Cambridge Centre for Smart Infrastructure and Construction, 01/13-07/16
- 23. Dr Seda Torisu, Crossrail KTP, 06/10-05/13
- 24. Mr Mohamad Alserdare, Crossrail KTP, 08/11-07/13
- 25. Dr Cedric Kechvarzi, Cambridge Centre for Smart Infrastructure and Construction, 01/13-present
- 26. Dr Alex Rohe, MPM Dredge Project, 04/13-03/14, 10/15-present
- 26. Dr Xiaomin Xu, Cambridge Centre for Smart Infrastructure and Construction, 03/13-present
- 27. Dr Joost Breedeveld, MPM Dredge Project, 02/14-05/14
- 27. Dr Yunfeng Gu, WSN for gas monitoring, 02/14 02/15
- 28. Dr David Rodenas, Cambridge Centre for Smart Infrastructure and Construction, 02/14-present
- 29. Dr Varindra Kumar, WSN hardware development, 10/14-04/16
- 30. Dr Sinan Acikgoz, London Bridge station project, 10/14 present
- 31. Dr Krishna Kumar, CSIC&BG project, 4/14 present
- 32. Dr Yi Rui, CSIC, 6/14 present
- 33. Dr Bruno Zuada Coelho, MPM Dredge Project, 10/15-12/15
- 34. Dr Alba Yerro, MPM Dredge Project, 11/15 present

Visiting researchers

University of Cambridge

- 1. Dr. N. Komiya (Waseda University, Japan), 5/98-3/99
- 2. Dr. S. Shu (Jilin University, China), 10/98-9/99
- 3. Dr. I. Kobayashi (Tokyo Institute of Technology), 5/99-3/00
- 4. Dr. J. Kawabata (Kajima Corporation, Japan), 5/99 6/00
- 5. Dr. S. Karim (University of Twentee, the Netherlands), 6/99-8/99
- 6. M. Kobayashi (Tokyo Gas, Japan), 11/99-12/99
- 7. Prof. K. Okada (Kokushikan University, Japan), 4/00-8/00
- 8. Dr. T. Hori (National Institute for Rural Engineering, Japan), 3/02&10/02
- 9. Dr. A.C. Mesquita (Federal University of Rio de Janeiro COPPE, Brazil), 4/02-3/03
- 10. Prof. A. Klar (Technion Israel Institute of Technology, Israel), 7/03 3/05
- 11. Prof. S. Burns (University of Virginia), 10/03-12/03
- 12. M. Buono Mascagni (Politecnico di Torino), 9/04-11/04
- 13. S. Giardino (Politecnico di Torino), 9/04-10/04
- 14. Prof. David Zheng (Tienjin University), 10/04-9/05
- 15. Dr Fuminao Okumura (Japan Railway Technical Research Institute), 10/05-05/06
- 16. Mohammad Norouz-Oliaei (Sharif University of Technology), 10/05-08/06

Kenichi Soga Curriculum Vitae

- 17. Prof. Toru Inui (Kyoto University), 05/06-03/07
- 18. Chikara Hirai (Japan Railway Technical Research Institute), 09/06-08/07
- 19. Prof. Taro Uchimura (University of Tokyo), 10/06-09/07
- 20. Prof. Andrew Whittle (MIT), 01/07-07/07
- 21. Prof. Carlos Santamarina (Georgia Tech), 07/07
- 22. Dr Yusuke Kobayashi (Japan Railway Technical Research Institute), 09/07-09/08
- 23. Dr. Wan Zuhairi Wan Yaacob (Universiti Kebangsaan Malaysia), 09/07-12/07
- 24. Keita Abe (Japan Railway Technical Research Institute), 09/08-09/09
- 25. Prof. Kerop Janoyan (Clarkson University), 02/09 07/09
- 26. Prof. Masafumi Okawara (Iwate University), 10/08 03/09
- 27. Prof. Motohei Kanayama (Kyushu University), 07/08-08/08, 02/09 03/09, 08/09-09/09
- 28. Prof. Shinya Nakamura (Ryukyu University), 02/09 03/09
- 29. Luca Masini (University of Rome), 07/08-08/08, 01/09-04/09
- 30. Prof. Xiaojun Li (Tongji University) 08/09
- 31. Akio Hada (Japan Railway Technical Research Institute), 09/09-09/10
- 32. Prof. Liyuan Tong (Southeast University) 09/09-09/10
- 33. Eric Diao (Tienjin University) 09/09-08/10
- 34. Prof. Katsuya Okada (Kokushikan University) 04/10-09/10
- 35. Dr. Kiwamu Tsuno (Japan Railway Technical Research Institute), 09/10-09/11
- 36. Fei Wang (Tongji University) 10/10-09/11
- 37. Prof. Fuxue Sun (Wenzhou University) 10/11-9/12
- 38. Prof. Jun Jiang (Zhejiang University) 10/11-9/12
- 39. Xia Bian (Southeast University) 2/12-1/13
- 40. Xuesong Cheng (Tianjin University) 10/12-9/13
- 41. Satoko Ryuo (Japan Railway Technical Research Institute), 9/11-9/12
- 42. Dr Yoshiharu Asaka (Shimizu Corporation), 10/11-9/12
- 43. Jiajie Ma (University of Western Australia), 2/12-5/12
- 44. Prof Jeff Evans (Bucknell University), 10/12-3/13
- 45. Dr Xiaomin Xu (UCL/Zhejiang University), 5/12-5/13
- 46. Kyosuke Yasuda (Japan Patent Agency), 7/12-6/13
- 47. Dr Tsukasa Mizutani (University of Tokyo), 7/12-8/12
- 48. Prof Bin He (Tongji University), 6/12-9/12
- 49. Prof Kohei Araki (Kyushu University), 10/12-12/12
- 50. Dr Tatsuya Nihei (Japan Railway Technical Research Institute), 9/12-9/13
- 51. Prof Fei Yi (Chang'an University) 10/12-9/13
- 52. Prof Dan Zhang (Nanjing University) 03/13-02/14
- 53. Koshiro Saito (Japan Patent Agency), 7/13-6/14
- 54. Dr Munenori Shibata (Japan Railway Technical Research Institute), 9/13-9/14
- 55. Prof. Cheol Ju Lee (Kangwon National University), 10/13-9/14
- 56. Dr Jaeyeon Cho (Yonsei Unviersity), 4/14-3/15
- 57. Prof. Young Seok Kim (Korea Institute of Construction Technology (KICT)), 6/14-5/15
- 58. Prof Hong-Hu Zhu (Nanjing University), 10/14-9/15
- 59. Prof Tom O'Rourke (Cornell University), 10/14-12/14
- 60. Chuanhu Zhang (Tsinghua University), 11/14-11/15
- 61. Dr Jimeng Feng (Southwest Jiaotong University), 2/15-1/16
- 62. Yuelang Jin (Tongji University), 3/15-2/16
- 63. Dr Seiji Yamada (Japan Railway Technical Research Institute), 2/15-8/15
- 64. Olga Mikhaylova (University of Melbourne), 10/15-2/16
- 65. Xiang Sun (Dalian Institute of Technology), 11/15-04/16
- 66. Yishu Wang (Hohai University), 11/15-10/16
- 67. Caijie Tang (BIACD) 11/15-12/15
- 68. Haizuo Zhou (Tianjin University) 11/15-10/16
- 69. Professor Chao-Sheng Tang (Nanjing University), 12/15-11/16
- 70. Professor Jason DeJong (University of California, Davis), 1/16-6/16
- 71. Professor Kazuyuki Hayashi (Wakayama College), 4/16-9/16

University of California, Berkeley

- 72. You Tian (Tsinghua University), 2/16-2/17
- 73. Guido Andreotti (University of Pavia), 9/16-12/16
- 74. Dr. Tzu-Hsuan Lin (Sinotech Inc), 10/16-9/17
- 75. Xiaorong Xu (Tsinghua University), 10/16-9/17

Research Collaboration

As invited visiting professor/researcher: Federal University of Rio de Janeiro, Brazil (March 1996), National Institute of Rural Engineering, Japan (August 1999), Chiba Institute of Technology, Japan (March 2000), Colorado School of Mines, USA (January -September 2001), Japanese Public Works Research Institute (January 2004), City University of Hong Kong (March 2005), Kyoto University, Japan (April 2005), Universitat Politecnica de Catalunya (July 2006), Hokkaido University, Japan (January 2007), Tokyo Institute of Technology (February, 2007), Georgia Institute of Technology/DOE/USGS (March 2008), National Institute of Advanced Industrial Science and Technology (August 2008), Chulalongkorn University (January 2009), Kyoto University (March-May 2009), Deltares (June-July 2009), EPFL (July 2010), University Teknologi Malaysia (2010, 2012), Tongji University (August 2010, June 2013), University of Rome (August and December, 2011), Zhejiang University (July 2013), University of Hong Kong (January 2014), Nanjing University (October 2014), Yokohama National University (June&July 2015), Southeast University (December, 2015)

I have/had collaborative research with the following academic institutions and companies.

- Academic/research institutions : Imperial College, University College London, Colorado School of Mines, University of Colorado-Boulder, Massachusetts Institute of Technology, Cornell University, Georgia Institute of Technology, University of California-Davis, University of Western Australia, Technical University of Delft, University of Montpellier, University of Bochum, Kyoto University, University of Tokyo, Tokyo Institute of Technology, Chiba Institute of Technology, Iwate University, Waseda University, National University of Singapore, University of Hong Kong, National Institute of Advanced Industrial Science and Technology, National Institute of Rural Engineering, Public Works Research Institute, Port Harbour Airport Research Institute, Railway Technical Research Institute, Czech Technical University in Prague, Consiglio Nazionale delle Ricerche, Universidad Politecnica de Catalunya, Tongji University, Zhejiang University, Tianjin University, Nanjing University and Tsinghua University.
- Companies : UK Highways Agency, Building Research Establishment, Schlumberger, BP, BG, Cambridge Insitu, London Underground Ltd., Tubelines, Metronet, Transport for London, Thames Water, Yorkshire Water, United Utilities, Cementation Skanska, Arup, Mott MacDonald, Atkins, Brown and Root Civil, Geotechnical Consulting Group, Buro Happold, ITM, CrossRail, Geothermal International, National Grid, CERN, Aeroflex, Rolatube, Costain, GE Aviation, CH2MHill, Network Rail, Insitu Integrity, Soletanche-Bachy, Deltares, Tractebel Engineering, Chemex International Ltd., JOGMEC, Nishimatsu Construction, Kajima Corporation, Shimizu Corporation, Tokyo Gas, Mitsubishi Heavy Industry, Toshiba, Topcon and Sankyong Construction.

Organising/Scientific Committee

- 2018 The 8th International Congress on Environmental Geotechnics (ICEG2018), International Advisory Committee
- 2018 The 7th World Conference on Structural Control and Monitoring, International scientific committee
- 2017 EURO:TUN 2017 conference, Scientific Advisory Committee
- 2017 1st International Conference on the Material Point Method for Modelling Large Deformation on Soil-Water-Structure Interaction, Delft, Scientific Committee and Local Organising Committee
- 2016 Fifth International Conference on Forensic Geotechnical Engineering, Advisory Committee
- 2016 1st International Conference on Natural Hazards and Infrastructure: Protection, Design, Rehabilitation, Steering Committee
- 2016 International Conference on Smart Infrastructure and Construction, Cambridge, Organiser
- 2016 Asia-Pacific-Euro Summer School on Smart Structures Technology, Cambridge, APESS 2016, Organiser
- 2016 International Mini Symposium CHUBU (IMS-CHUBU), the International Technical Committee
- 2016 The 15th World Conference of Associated research centers for the Urban Underground Space, ACUUS 2016, Scientific Committee
- 2015 UK-Japan Workshop on Ageing Transport Infrastructure Management, British Embassy, Tokyo, Organsier
- 2015 6th International Conference on Advances in Experimental Structural Engineering (6AESE) and the 11th International Workshop on Advanced Smart Materials and Smart Structures Technology (11ANCRiSST), University of Illinois- Urbana Champaign, Scientific Committee
- 2015 CSIC-University of Tokyo Joint workshop on Sensing and Data-utilisation for Infrastructure, Organiser

- 2015 International Symposium on Geohazards and Geomechanics, Scientific Committee
- 2015 The Cambridge conference on wireless sensor network for civil infrastructure, Organiser
- 2015 The Fifth International Symposium on Geotechnical Safety and Risk (ISGSR), International Advisory Committee
- 2014 The 5th International Forum on Opto-electronic Sensor-based Monitoring in Geo-engineering (5th OSMG-2014), Academic Committee
- 2014 TC105 IS-Cambridge International Symposium on Geomechanics from Micro to Macro, Cambridge, Chairman
- 2014 The Cambridge Conference on Fibre Optic Sensing in Civil Infrastructure, Organiser
- 2014 NSF International Workshop on Geotechnical Engineering Education Soil-environment interactions across scales: key challenges for future geo-engineers, Organiser
- 2014 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics (14IACMAG), Kyoto, Session Chair
- 2014 The 2nd CSIC-JSPS International Smart Infrastructure Symposium, Osaka, Organiser
- 2013 ECCOMAS Thematic Conference on "Computational Methods in Tunnelling" (EURO:TUN 2013), Organiser
- 2012 CSIC-JSPS International Smart Infrastructure Symposium, Cambridge, Organiser
- 2012 CISM (International Centre for Mechanical Sciences) course Multiscale Mechanics of Granular Materials, Organiser
- 2012 2nd International Conference on Transportation Geotechnics, International Advisory Committee
- 2012 Geotechnique Symposium in print, Organising committee
- 2011 NSF Bio-Soil Interactions and Engineering Workshop, Principal Organiser
- 2011 ASCE Geofrontiers, Session Organiser, Energy Foundations
- 2011 ASCE Geofronties, Session Organiser, Bio-soil interaction
- 2010 ICITG Shanghai 2010: 1st International Conference on Information Technology in Geo-Engineering, International Academic Committee
- 2010 EPSRC WINES Smart Infrastructure Showcase event, Cambridge, Principal Organiser
- 2010 ASCE GeoFlorida 2010: Advances in Analysis, Modeling and Design, International Advisory Committee
- 2010 IS-Shanghai International Symposium on Geomechanicsand Geotechnics: From Micro to Macro, International Advisory Committee
- 2010 7th International Conference on Physical Modelling in Geotechnics, International Advisory Committee
- 2009 EURO:TUN, Computational Methods in Tunnelling, International Advisory Committee
- 2008 ESF/NSF workshop on Energy, Principal Organiser
- 2008 ASCE GeoCongress, Session Organiser, Soil-Bio Interaction and Engineering
- 2008 ESF/NSF workshop on Sensor Networks for Civil Infrastructure Systems, Principal Organiser
- 2008 ICE-JSCE workshop on new trends of seismic geotechnical design based on performance and life cycle analysis, Principal Organiser
- 2007 EPSRC/NSF Bio-Soil Interactions and Engineering Workshop, Principal Organiser
- 2007 Geotechnique Symposium in print, Organising committee
- 2006 International Congress on Environmental Geomechanics, Organising committee
- 2006 ASCE GeoCongress2006, Session Moderator
- 2006 Cambridge-MIT Institute Workshop on wireless sensor network, Co-organiser
- 2005 EPSRC/NSF workshop of microgeomechanics, Co-organiser
- 2004 Innovation in Monitoring and Management of Ageing Infrastructure, Principal organiser
- 2002 1st International Workshop on New Frontiers in Computational Geotechnics, Scientific Committee

Speaker/Seminar (since 2010) 2016

| 2010 | | |
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| February | Seminar | University of California-Berkeley |
| February | Seminar | Arup, San Francisco Office |
| March | Keynote | 1st IMEKO TC-4 International Workshop on Metrology for Geotechnics, Benevento, |
| | | Italy |
| March | Keynote | Mott MacDonald Geotechnical Forum, Cambridge |
| April | Seminar | University of Sheffield |
| May | Invited Speaker | 34th Annual Geo-Engineering Distinguished Lecture Series, San Francisco |
| May | Invited Speaker | International Workshop on Modern Trends in Geomechanics, Assisi |
| May | Seminar | University of L'Aquila |
| June | Seminar | University of Cambridge |
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| | | Curriculum vitae |
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| June | - | Kyoto Seminar 2016 : Developments in Earthquake Geotechnics |
| June | Seminar | University of Padova |
| June | Lecturer | 2016 Asia-Pacific-Euro Summer School on Smart Structures Technology, Cambridge |
| July | Lecturer | 5th International Summer School on Smart Materials and Structures, Trento |
| July | Invited Speaker | NSF Workshop on Geotechnical Fundamentals in the face of new world challenges |
| August | Speaker | Army Research Office Workshop on Physical, Mathematical, and Computational Aspects |
| | | Related to Soil Modeling and Simulation |
| August | Keynote | The 1st International Conference on Energy Geotechnics ICEGT 2016, Kiel, Germany |
| August | Seminar | BJAN (Berkeley Japanese Academic Network) Seminar, Berkeley |
| September | Seminar | Swarm Laboratory, Berkeley |
| September | Seminar | Geosyntec, Oakland |
| October | Seminar | CITRIS research exchange seminar series, Berkeley |
| October | Speaker | CEGA third annual Measurement Conference: Infrastructure Monitoring, Berkeley |
| November | Lecturer | 9th Lumb Lecture, University of Hong Kong |
| November | Seminar | Shenzhen Geotechnical Investigation & Surveying Institute Co., Ltd., China |
| December | Seminar | Pacific Consulting, Tokyo, Japan |
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| 2015 | | |
| February | Lecture | Micromechanics Seminar, University of Cambridge |
| March | Seminar | Department of Civil and Environmental Engineering, University of California at |
| | | Berkeley |
| March | Keynote | Korean Geotechnical Society Annual Convention, Seoul |
| March | Keynote | The Sixth Instrumentation and Monitoring Conference, London |
| April | Seminar | Department of Civil and Environmental Engineering, University of Illinois at |
| | | Urbana-Champaign |
| April | Lecture | Osterberg Lecture, Northwestern University |
| May | Invited Speaker | 7th International Conference on Porous Media, Padova, Italy |
| June | Invited Speaker | International Symposium on Energy Geotechnics, Barcelona |
| June | Keynote | Workshop on Sensing and Information for Civil Infrastructure, Japanese Society of |
| | | Civil Engineers |
| June | Lecture | Yokohama National University, Yokohama, Japan |
| June | Lecture | Hitachi Central Research Laboratory, Kokubunji, Japan |
| June | Seminar | School of Civil Engineering & Geosciences, Newcastle University |
| June | Speaker | The Cambridge conference on wireless sensor network for civil infrastructure, Cambridge |
| July | Keynote | NERC/CSIC Workshop on remote monitoring of geotechnical assets, British |
| - | - | Geological Survey, London |
| July | Keynote | YHU-IAS/JGS Symposium on Risk and Geotechnical Engineering, Yokohama |
| July | Speaker | CSIC-University of Tokyo Symposium on Sensing and Data-utilisation for |
| | | Infrastructure |
| July | Invited Speaker | Seminar on exporting infrastructure systems, the Ministry of Land, Infrastructure, |
| | | Transport and Tourism, Japan |
| August | Keynote | 6th International Conference on Advances in Experimental Structural Engineering |
| | | (6AESE) and the 11th International Workshop on Advanced Smart Materials and |
| | | Smart Structures Technology (11ANCRiSST), University of Illinois- Urbana |
| | | Champaign |
| September | Keynote | XVI European Conference on Soil Mechanics and Geotechnical Engineering, |
| | | Edinburgh |
| September | Invited Speaker | The First Cambridge Workshop on Energy Transport and Urban Infrastructure |
| September | Invited Speaker | Workshop on Numerical Methods of Water-Soil Boundary Layers under Currents |
| - | * | and Waves, Hamburg |
| October | Speaker | ACTUE Workshop on "Recent Advances in Tunnelling", Salzburg |
| October | Invited Speaker | Soil-Plant-Atmosphere-Continuum 2015 Conference, Rothamsted Research |
| October | Invited Speaker | Sensors Day 2015, Cambridge |
| November | Speaker | FPS-Crossrail Lessons Learnt Conference, London |
| December | Lecture | Beijing Institute of Aerospace Control Devices (BIACD) |
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| December | Lecture | Nanjing University |
| December | Lecture | Southeast University |
| December | Keynote | The 1st International Conference on Geo-Energy and Geo-Environment (GeGe2015), Hong Kong |
| December | Invited Speaker | UK-Japan Workshop on Ageing Transport Infrastructure Management, British Embassy |
| December | Lecture | Japan Railway Technical Research Institute |
| 2014 | | |
| January | Lecture | University of Hong Kong, Hong Kong |
| | Lecture | Hong Kong University of Science and Technology, Hong Kong |
| | Lecture | Hong Kong Institution of Engineers, Hong Kong |
| | Lecture | JOGMEC, Chiba |
| February | Lecture | Thames Tideway Tunnel, London |
| March | Panelist | GE Instrumentation and Monitoring conference, London |
| May | Keynote | GeoShanghai 2014, Shanghai |
| June | Speaker | The Cambridge Conference on Fibre Optic Sensing in Civil Infrastructure, Cambridge |
| June | Invited speaker | International Conference on Multi-hazard Approaches to Civil Infrastructure |
| | | Engineering |
| | | (ICMAE), Chicago |
| July | Invited speaker | Conference on "Modeling Granular Media Across Scales", Montpellier |
| July | Invited speaker | Smart Infrastructure conference, Nikkei Shinbun, Tokyo |
| July | Lecture | Sumitomo Electric, Tokyo |
| September | Keynote | The 2 nd International Smart Infrastructure Symposium, Osaka |
| October | Keynote | 5th International Forum on Opto-electronic Sensor-based Monitoring in |
| 0.1 | T . | Geo-engineering, Nanjing |
| October | Lecture | Nanjing University, Nanjing |
| October | Lecture | Southeast University, Nanjing |
| October | Lecture | Geotechnical Consulting Group, London |
| October | Invited speaker | Geotechnical Asset Owners Meeting, Cambridge |
| November | Lecture | Graz University of Technology, Graz, |
| November | Theme speaker | 7th International Congress on Environmental Geotechnics, Melbourne |
| December | Invited speaker | MPM Dredge workshop, Cambridge |
| 2013 | | |
| January | Keynote | Symposium on Observational Method, Kyoto, Japan |
| March | Keynote | International Workshop "Thermoactive Geotechnical Systems for Near-Surface Geothermal Energy: from research to practice", Lausanne |
| June | Keynote | Géotechnique Symposium in Print on "Bio- and Chemo-Mechanical Processes in Geotechnical Engineering", London |
| June | Theme lecturer | EAGE Gas Hydrate Workshop, London |
| July | General Report | TC215 Symposium "Coupled Phenomena in Environmental Geotechnics," Torino |
| July | Invited speaker | International workshop "Geoengineering Energy Geo-Storage," Weimar |
| July | Lecture | Zhejiang University, China |
| August | Invited speaker | Yunnan Construction Group seminar, Churchill College, Cambridge |
| August | Theme lecturer | IEEE R10-HTC2013, Sendai, Japan |
| September | Speaker | ISSMGE Paris Conference |
| September | Session leader | ISSMGE Paris Conference |
| September | Lecture | Mott MacDonald |
| September | Invited speaker | Tsinghua University, China |
| October | Lecture | PUC, Rio de Janeiro |
| October | Lecture | BG-Brazil |
| October | Lecture | CSIC – FO training event |
| October | Invited speaker | DNV annual seminar event |
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| October | Keynote | Telford workshop on wireless sensor network |
| November | Lecture | |
| November | Keynote | GEOTEC HANOI 2013, Hanoi |
| December | Invited speaker | GSHPA annual conference |
| December | Lecture | Croce Lecture, Rome |
| December | Invited speaker | MPM workshop, Deltares |
| 2012 | | |
| January | Invited speaker | RAEng-ICE event for innovation in Construction |
| February | Seminar | Cambridge Geotechnical Group seminars, Cambridge |
| February | Invited speaker | Yorkshire Geotechnical Group meeting, Sheffield |
| March | Invited speaker | Geotechnical Instrumentation and Monitoring 2012 conference, London |
| March | Keynote | EC MEMSCON Workshop - Towards Intelligent Civil Infrastructure, Athens |
| April | Theme speaker | NSF international workshop on Smart and Resilient Transportation Infrastructure, |
| | | Virginia Tech |
| April | Seminar | Virginia Tech, USA |
| May | Keynote | International Workshop on ICT in Geo-Engineering, Kyoto |
| May | Special lecture | Japanese Geotechnical Society "Construction in difficult ground" Committee |
| Terra e | C | meeting |
| June | Seminar | Tongji University, Shanghai Loing O'Bourles Construction Technology Mesters course |
| June | Lecture Seminar | Laing O'Rourke Construction Technology Masters course |
| June | Seminar | University Teknologi Malaysia, Malaysia |
| June | Seminar | Engineering Institution of Malaysia Vlaamse Overheid, Belgium |
| July July | Invited speaker | YELGIP workshop on Shallow Geothermal Energy Applications in Civil |
| July | mvned speaker | Engineering |
| July | Keynote | LimesNet Research Conference 2012 |
| September | Lecture | CISM (International Centre for Mechanical Sciences) course - Multiscale Mechanics |
| 1 | | Of Granular Materials |
| September | Lecture | Hong Kong Institution of Engineers |
| September | Speaker | BP Institute Seminar |
| September | Speaker | Arup Research Event |
| September | Speaker | Ground Source Heat Pump Association meeting |
| October | Theme speaker | New measurement methods in soil physics: future frontiers, Rothamsted |
| November | Speaker | TSB Sensing and Measurement for Infrastructure, London |
| December | Lecture | Kunming University of Science and Technology, China |
| December | Lecture | Yunnan Provincial Science & Technology Department and Yunnan Academy of |
| | | Applied Technology, China |
| 2011 | | |
| January | Invited speaker | Symposium on Graduate Education, Tokyo Institute of Technology |
| January | Invited lecturer | JSPS/JETRO, London |
| January | Invited lecturer | University of Montpellier, France |
| February | Invited lecturer | East Midlands Geotechnical Group Seminar, Nottingham |
| March | Invited lecturer | Telford Medal Lecture, ICE, London |
| March | Speaker | ASCE GeoFrontiers Conference, Dallas, USA |
| March | Invited Speaker | 2011 International Conference on Low Carbon Energy and Climate Change, |
| | | Tsinghua University, China |
| April | Lecturer | Arup |
| May | Keynote | EPSRC Energy Harvesting Network Workshop (Structural Monitoring) |
| May | Invited speaker | BGA Recent Advances in Monitoring & Instrumentation with Emphasis on |
| | | Applications to Practical Engineering |
| May | Invited speaker | Geotechnical Asset Owners Meeting |
| May | Invited speaker | Piling and Foundations UK conference |
| May | Invited speaker | IS-Roma 7th International Symposium Geotechnical Aspects of Underground |
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| | | Construction, Rome |
| May | Invited speaker | Modern Built Environment Network meeting, London |
| July | Invited speaker | International Workshop on Computational Models in Geomechanics and Tunneling, |
| | | Bochum |
| August | Lecturer | Tianjin University, China |
| September | Discuss. Leader | European Conference on Soil Mechanics and Geotechnical Engineering, Athens. |
| October | Invited speaker | ALERT workshop, Aussios |
| October | Lecturer | University of Rome, Italy |
| October | Panelist | 5th International Symposium on Submarine Mass Movements and Their |
| | | Consequences, Kyoto |
| November | Invited lecturer | Deltares, Delft |
| November | Invited speaker | Ground Source Heat Pump Association Seminar, Cambridge |
| November | Invited lecturer | Buro Happold |
| November | Lecturer | University of Rome, Italy |
| December | Invited lecturer | Zhejiang University, China |
| December | Invited lecturer | Tongji University, China |
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| January | Invited speaker | Kyoto Seminar 2010: Geotechnics/Earthquake Geotechnics towards Global Sustainability, Kyoto, Japan |
| January | Invited speaker | Ground Source Heat Pump Association meeting |
| March | Invited speaker | Cambridge-Kyoto Seminar, Cambridge |
| March | Invited lecturer | Columbia University, USA |
| April | Invited speaker | ESF S(3)T2010 Smart Structural System Technologies Workshop, Porto |
| April | Invited speaker | Wireless Sensors for Volcano Surveillance, Cambridge |
| April | Invited speaker | TNO workshop Geotechnical Advances in Urbal Renewal: Analysis & Design, |
| 1 | 1 | London |
| May | Organiser | Smart Infrastructure showcase |
| May | Invited lecturer | Public Works Research Institute, Japan |
| May | Invited speaker | Workshop on bio-soil interaction and engineering, Japan |
| June | Invited speaker | Gordon Conference - Natural Gas Hydrate Systems, Hydrate- Sediment- Fluid |
| | - | Interactions at Pore To Regional Scale, Maine, USA |
| July | Invited lecturer | ALERT Olek Zienkiewicz Course 2010, EPFL, Switzerland |
| July | Invited lecturer | Masonry Arch Bridges Masterclass - Recent Developments, Bristol |
| September | Invited lecturer | Tongji University, China |
| September | Keynote | 1st International Conference on Information Technology in Geo-Engineering |
| | | (ICITG-Shanghai 2010), Shanghai |
| October | Invited lecturer | GE / NCE Basements and Underground Structures conference, London |
| October | Keynote | International Symposium on Geomechanics and Geotechnics: From Micro to Macro |
| | | (IS-Shanghai 2010), Shanghai |
| October | Invited lecturer | Southeast University, Nanjing, China |
| October | Keynote | Paymacotas Workshop on Tunnel Engineering-Instrumentation in Tunnels and |
| | | Excavations, Barcelona |
| November | Plenary | 6ICEG 2010 6th International Congress on Environmental Geotechnics, India |
| November | Invited speaker | International Symposium on Methane Hydrate Resources – from Mallik to the |
| | | Nankai Trough, Tokyo |
| December | Invited speaker | Geotropika 2010: an international conference on geotechnical and transportation |
| | | engineering, Malaysia |
| December | Invited lecturer | Universiti Teknologi Malaysia, Malaysia |
| December | Invited speaker | GAOF and MBE KTN workshop on remote sensing for transport infrastructure |
| | | assets, London |
| December | Speaker | GM3 Traveling workshop |
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Grants and Contracts

Funding Agencies

- Engineering and Physical Sciences Research Council : PI "Funds to join EEFIT mission to South Hyogo (Kobe) [1] earthquake of 1995," 1 March, 1995 - 30 June, 1995 (3 months), £1,000 (+£1,500 contribution from Industry)
- [2] European Commission : PI "Real-time modelling and compensation of soil movements on underground sites (COSMUS)," 1 December, 1996 - 31 May, 2000 (42 months), €332,000 (Co-I. Dr. M.D. Bolton)
- Engineering and Physical Sciences Research Council : Co-I. "Investigation of ground loading applied to an old [3] London Underground tunnel," 1 September, 1997 - 31 August, 1999 (24 months), £117,101 (+£65,000 contribution from Industry), (PI. Dr. M.D. Bolton, Co-I. Prof. R.J. Mair)
- [4] European Commission : PI. "Investigation of NAPL migration processes in the unsaturated zone (vadose zone)," Training and Mobility of Reseachers (TMR) Programme, Marie Curie Research Training Grant for Mr. C. Kechavarzi, 1 January, 1998 - 31 December, 2000 (36 months), €80,000
- ESSO Teaching Grant : PI. "Image analysis of contaminants migration in soils," September, 1998, £7,343 [5]
- Engineering and Physical Sciences Research Council: PI. "Investigation of time effects on soil behaviour and their [6] influence on construction activities" 1 October, 1998 - 30 September, 2001 (36 months), £155,933 (+£70,000 contribution from Industry), (Co-I. Dr. M.D. Bolton)
- [7] Engineering and Physical Sciences Research Council : Co-I. "The mechanisms of tunnelling-induced ground movements and their progressive effects on buildings," 30 March, 2000 - 29 March 2002 (36 months), £133,446 (+£225,000 contribution from Industry), (PI. Prof. R.J. Mair, Co-I. Dr. J. Standing)
- [8] Joint Infrastructure Fund and Engineering and Physical Sciences Research Council : Co-I. "Centre for geotechnical processes and construction modelling," 1 August 2000 - 31 July 2004 (48 months), £1,861,156, (PI. Prof. R.J. Mair, Co-I. Prof. A.C. Palmer, Dr. M.D. Bolton, Dr. S.P.G. Madabhushi, Dr. A. Al-Tabbaa and Dr. R.J. Lynch)
- [9] Engineering and Physical Sciences Research Council : PI "Travel grant to develop US collaboration on contaminant source remediation testing facility," 15 December 2000 to 14 October 2000 (10 months), £9,273 **European Commission** : PI "GEOTECHNET", 1 December 2001- 30 November, 2005 (48 months), €25,200
- [10]
- [11] European Commission : Co-I "New methods of mitigation of seismic risk on existing foundations,", 1 May 2002 – 31 April 2005 (36 months), €572,900 (PI. S.P.G. Madabhushi, Co-I. Prof. M.D. Bolton)
- [12] Engineering and Physical Sciences Research Council: PI. "Insitu assessment of contaminant containment system" 1 October, 2002 - 30 September, 2005 (36 months), £203,765 (+£63,000 contribution from Industry), (Co-I. Prof. R.J. Mair)
- Engineering and Physical Sciences Research Council: Co-I. "The effects of tunneling on piled foundations" 1 June, [13] 2002 - 30 May, 2004 (24 months), £186,968 (+£543,000 contribution from Industry), (PI. Dr. J.S. Standing and Co-I. Prof. R.J. Mair)
- [14] Cambridge-MIT Institute : Co.-I "New technologies for condition assessment and monitoring of ageing infrastructure," 1 August, 2002 - 31 July, 2005 (36 months), £610,639 (PI. Prof. R.J. Mair)
- British Council-CRUI : PI "Travel Grant: Trenchless technology for sustainable cities: reduction of jacking forces in [15] clays," 1 January 2004 – 31 December 2004, £4,000, (PI- Dr M. Barla, Politecnico di Torino)
- Engineering and Physical Sciences Research Council : PI. "RAIS; Insitu assessment of contaminant containment [16] system" 1 April, 2004 - 31 March, 2005 (12 months), £32,739.00
- [17] Engineering and Physical Sciences Research Council : Co-PI "PLATFORM: New technology & new horizons in geotechnical research & development," 1 October, 2004 - 31 September, 2008 (48 months), £435,277 (PI Prof. M.D. Bolton, Co-PI. Dr S.P.G. Madabhushi, Prof. R.J. Mair, Dr. A. Al-Tabbaa, Dr. R.J. Lynch, Dr. D.J. White and Dr. E.T. Bowman).
- Biotechnology and Biological Sciences Research Council : PI "Case Studentship", January 2005 to December 2008, [18] £15,000,
- Isaac Newton Trust : PI "Methane hydrates, matching fund" £19,500 [19]
- Engineering and Physical Sciences Research Council : PI "Industrial CASE studentship", October 2005 -[20] September 2008, £59,464
- [21] New Energy and Industry Technology Development Organisation (NEDO), PI "International Familiarization of ISO Code for Geotechnical Earthquake Resistant Design", October 2005-September 2008, ¥3,500,000 (appx. £17.500)
- Highways Agency, PI "Slope monitoring using fibre optic technology", October 2005 March 2007, £85,000 (Co-I : [22] Prof. Mair)
- Cambridge-MIT Institute : Co.-I "New technologies for condition assessment and monitoring of ageing [23] infrastructure- Extension," 1 August, 2002 – 31 August 2006, £15,000 (PI. Prof. R.J. Mair)
- Engineering and Physical Sciences Research Council : PI "Smart Foundations with Distributed Fibre Optics [24] Technology," 1st April 2006 – 31st March 2009, £281,307 (+£59,000 contribution from Industry) (Co-I : Prof. Mair)

Curriculum Vitae

- [25] Engineering and Physical Sciences Research Council : PI "Smart Infrastructure: Wireless sensor network system for condition assessment and monitoring of infrastructure," 1st October 2006 – 30th September 2009, £777,034 (Co-I : Prof. Mair, Dr. Middleton, Dr Wassell, Dr Stajano)
- [26] European Science Foundation : PI "Micro-Measurement and Monitoring System for Ageing Underground Infrastructures (Underground M3)," 1st October 2006 – 30th September 2009, £441,832 (Co-I : Prof. Mair, Prof. Cipolla, Dr Seshia)
- [27] Engineering and Physical Sciences Research Council: Co-PI "Delivering sustainable water systems by optimising existing infrastructure via improved knowledge, understanding and technology – project NEPTUNE", (Co-PI. Dr R. Fenner), £247,016
- [28] European Science Foundation : PI "Workshop on Sensor Networks for Civil Infrastructure Systems," April 2008, €26,800
- [29] Engineering and Physical Sciences Research Council: Co-PI "Bridging The Gaps: Cam-Bridge-Sens," 31 March 2008 30 March 2010, £250,000
- [30] Engineering and Physical Sciences Research Council: Co-I "UCL Cambridge Doctoral Training Centre in Photonic Systems Development"
- [31] Engineering and Physical Sciences Research Council : PI "Industrial CASE studentship with Arup", October 2008 September 2011, £60,000
- [32] Engineering and Physical Sciences Research Council : PI "Commercialisation of Smart Foundation System" March 2010 – February 2011, £88,498
- [33] Knowledge Transfer Partnership : Co-PI, Crossrail Ltd., April 2010 March 2013, £387,055 (PI. Mair)
- [34] Cambridgesens : Co-PI "Wireless sensor networks for volcano surveillance," May 2010-September 2010, £15,000
- [35] Engineering and Physical Sciences Research Council: PI "Knowledge transfer secondment; Intelligent Fibre Optics Monitoring of Infrastructure-Trend, Change and Abnormal Signal," 1st April 2010 to 31st March 2011, £94,329
- [36] Low Carbon Energy University Alliance : PI "Geo-Energy Systems Simulator: From Building scale to City scale," October 2010 – September 2013, \$200,000
- [37] Engineering and Physical Sciences Research Council: Co-I "Innovation and Knowledge Centre for Smart Infrastructure and Construction", April 2011-March 2016, £9,956,319
- [38] Engineering and Physical Sciences Research Council: PI "ICASE-Arup, Deep Geomechanics", October 2012-March 2016, £60,000
- [39] Engineering and Physical Sciences Research Council: PI "ICASE-Halcrow, Assessment and retrofit of non-compliant sections of London Underground Tunnels", October 2012-March 2016, £60,000
- [40] Engineering and Physical Sciences Research Council: PI "ICASE-Arup, Improving the efficiency of interpreting monitoring data", October 2012-March 2016, £60,000
- [41] European Commission: PI "MPM-DREDGE— MPM modelling and simulation of soil-fluid interaction for dredging applications," March 2013-February 2016, €557,440.
- [42] Engineering and Physical Sciences Research Council: PI "ICASE-Arup, Life Cycle Analysis of Civil Infrastructure", October 2012-March 2016, £ 68,648
- [43] Engineering and Physical Sciences Research Council: Co-I, "CDT Cembridgesens", October 2014-September 2019, £4,068,526
- [44] CERN "PhD studentship", PI October 2014-September 2017, £150,000 (appx.)
- [45] Engineering and Physical Sciences Research Council: PI "Impact Acceleration Account Follow-On Fund, Developing the Second CSIC FOSA Prototype System (FOSA-PS2): to accelerate affordability and scale-up manufacturing capability for civil engineering industry," January 2015 – September 2015, £59,916
- [46] **CNPq Science without Borders (SwB)/BG Brazil fellowship programme**: PI "International Human Resources Training in Petroleum Geomechanics," £1,876,312, October 2015 September 2021
- [47] Engineering and Physical Sciences Research Council: Co-I "ICASE-Arup, Modelling concreting of piling and diaphragm walls", October 2016-March 2020, £68,648
- [48] Engineering and Physical Sciences Research Council: Co-I "Innovation and Knowledge Centre for Smart Infrastructure and Construction Phase 2," April 2016-March 2021, £5,000,000

Industry (inc. research-based consultancy through Cambridge University Consultancy Services CUTS)

- [1] **Geo-Research Institute, Japan** : PI "The properties of London clay and the Woolwich & Reading Bed in London," 1 October, 1995 - 31 March, 1996 (6 months)
- [2] Shimizu Corporation, Japan : PI "Seismic performance of rockfill dams," 1 November, 1995 31 March, 1996 (5 months)
- [3] Nishimatsu Construction, Japan : PI "Evaluation of contaminated soils using electrical properties measurement," 1 April, 1996 - 31 March, 1998 (24 months)

- [4] **Tokyo Gas, Japan** : PI "Incorporation of soil models into ABAQUS," 1 October, 1996 31 September, 1998 (24 months)
- [5] Sunkyong Engineering & Construction Ltd., Korea : PI "Finite element modelling of electro-osmosis consolidation," 1 December, 1996 31 May 1997 (6 months)
- [6] **Kajima Construction, Japan** : PI "Monitoring of contaminant migration in soils" 1 February, 1997- 31 January 1999 (24 months)
- [7] Shimizu Corporation, Japan : PI "The study of seismic liquefaction damages to pile foundation and neighboring quay-walls", 20 January 1997 to 31 March 1997 (1.5 months)
- [8] Nishimatsu Construction, Japan : Co-I. "Investigation of grouting on tunnel lining," 1 May 1997- 31 April 1999 (24 months)
- [9] Nishimatsu Construction, Japan : PI "Extension : Evaluation of contaminated soils using electrical properties measurement," 1 June, 1998 31 May, 2000 (24 months)
- [10] Shimizu Corporation, Japan : PI "The Stability of Sands Slopes during Earthquake", 1 November 1998 to 31 March 1999 (5 months)
- [11] Schlumberger Cambridge Research Limited, December, 1998
- [12] **Tokyo Gas, Japan** : PI "Extension : Incorporation of soil models into ABAQUS," 1 October, 1998 31 September, 1999 (12 months)
- [13] **Kajima Construction, Japan** : PI "Extension : Monitoring of contaminant migration in soils" 1 February, 1999- 31 January 2001 (24 months)
- [14] Nishimatsu Construction, Japan : Co-I. "Effects of tunnelling and deep excavations on piled foundation," 1 October 1999- 30 September 2001 (24 months)
- [15] Schlumberger Cambridge Research Limited, December, 1999
- [16] **Shimizu Corporation, Japan** : PI "The Stability of Sands Slopes during Earthquake", 1 October 1999 to 31 March 2000 (6 months)
- [17] Tokyo Gas, Japan : PI "Soil-pipeline analysis," 1 April, 2000 31 March, 2001 (12 months)
- [18] Tokyo Gas, Japan : PI "Soil-pipeline analysis," 1 April, 2001 31 March, 2002 (12 months)
- [19] Teikoku, Japan : PI "Design of pipeline for agricultural use," 1 July, 2001 30 June, 2002 (12 months)
- [20] Nishimatsu Construction, Japan : Co-I. "Extension : Effects of tunnelling and deep excavations on piled foundation," 1 October 2001- 30 September 2003 (24 months)
- [21] **Teikoku, Japan** : PI "Investigation of rainfall induced embankment failure," 1 March, 2002 30 September, 2002 (6 months)
- [22] Nishimatsu Construction: Co-I. "Soil conditioning, field monitoring and data interpretation of CTRL 220," 1 April 2001- 30 September 2003 (24 months)
- [23] **Kajima Construction, Japan** : PI "Numerical simulation of airsparging field study" 1 October, 2002- 31 March 2003 (6 months)
- [24] Kajima Construction, Japan : PI "Insitu assessment of contaminated land" 1 November, 2002- 31 October 2004 (23 months)
- [25] Tokyo Gas, Japan : PI "Soil-pipeline analysis," 1 October, 2002 31 March, 2003 (6 months)
- [26] Tokyo Gas, Japan : PI "Soil-pipeline analysis," 1 April, 2004 31 December, 2004 (12 months)
- [27] **KFC, Japan** : PI "Research donation", 1 April 2004
- [28] National Institute of Advanced Industrial Science and Technology, Japan : PI "Gashydrate production," 1 April 2004 31 March 2005 (12 months)
- [29] Skanska Cementation : PI "Fibre optic strain measurements", 1 April 2004
- [30] Skanska Cementation : PI "Paddington monitoring", 1 April 2004
- [31] Japan Anchor Society : PI "Soil-grout-anchor interaction", September 2004 August 2005
- [32] Thames Water : PI "Chingford monitoring and assessment," November 2004
- [33] Cross London Rail Links : PI "Farringdon monitoring" March 2005
- [34] KFC, Japan : PI "Research donation", August 2005
- [35] Tokyo Gas, Japan : PI "Soil-pipeline analysis," 1 October 2005 15 February, 2006 (12 months)
- [36] Arup Geotechnics, PI "Embodied energy and whole life cycle analysis of civil engineering infrastructures matching fund with EPSRC Case studentship," October 2005 August 2008
- [37] Cambridge Insitu, PI "PhD studentship", October 2005 August 2008
- [38] Japan Anchor Society : PI "Soil-grout-anchor interaction Extension", September 2005 August 2006
- [39] Japan Oil, Gas And Metals National Corporation : PI "Methane hydrate extraction modelling," February 2006 March 2007
- [40] National Institute of Advanced Industrial Science and Technology, Japan : PI "Gashydrate production," 1 September 2005 – 31 August 2006 (12 months)

- [41] National Institute of Advanced Industrial Science and Technology, Japan : PI "Gashydrate production," 1 September 2006 – 31 August 2007 (12 months)
- [42] Schlumberger: PI "Soil fractures in wellbores", 1st October 2006 31st September 2007
- [43] Tokyo Gas: PI "Soil-pipeline interaction", 1st October 2006 March 2007
- [44] Japan Anchor Society : PI "Soil-grout-anchor interaction Extension", September 2006 August 2007
- [45] **Singapore Land Transport Authority** : PI "Fibre optics monitoring for Singapore Metro construction,", 1 December 2006
- [46] Skanska Cementation : PI "Beckton Fibre optics monitoring", 1 April 2007
- [47] Skanska Cementation : PI "Lambeth college thermal pile tests," 1 October 2007
- [48] Japan Oil, Gas And Metals National Corporation : PI "Methane hydrate extraction modelling," December 2007 March 2008
- [49] Tokyo Gas: PI "Soil-pipeline interaction", 1st October 2007 March 2008
- [50] Arup, PI "NHBC Foundation Project" 1st December 2007
- [51] Arup, PI "Development of a tool for assessing Embodied Energy and Carbon Emissions for HA construction projects" 1st December 2007
- [52] National Institute of Advanced Industrial Science and Technology, Japan : PI "Gashydrate production," 1 September 2007 – 31 August 2008 (12 months)
- [53] Soldata : PI "Fibre optics monitoring on London Underground Tunnel" May 2008
- [54] Tokyo Gas: PI "Soil-pipeline interaction", 1st October 2008 March 2009
- [55] Tokyo Gas: PI "Gas migration modeling in soils", 1st October 2008 March 2009
- [56] National Institute of Advanced Industrial Science and Technology, Japan : PI "Gashydrate production," 1 September 2008 – 28 February 2009 (5 months)
- [57] Japan Oil, Gas And Metals National Corporation : PI "Methane hydrate extraction modelling," October 2008 March 2009
- [58] Arup, PI "PhD studentship for Kirk Ellison" 1 October 2008 31 September 2011
- [59] Arup, PI "Life Cycle Analysis of Civil Infrastructure ICASE studentship supplement" 1 October 2008 31 September 2011
- [60] Japan Oil, Gas And Metals National Corporation : PI "Methane hydrate extraction modelling," October 2009 September 2010
- [61] Southend on Sea Borough Council: "Slope monitoring using Fibre optics", 1 September 2009 September 2010
- [62] Tokyo Gas: PI "Soil pipeline interaction in unsaturated soils", 1st October 2009 February 2010 (through CUTS)
- [63] **BP**: PI "Run-off modeling" 1st October 2009 September 2012
- [64] Southend on Sea Borough Council: "Slope monitoring using Fibre optics-Phase 2"
- [65] **Tokyo Gas**: PI "Soil pipeline interaction in unsaturated soils", 1st October 2010 February 2011
- [66] Japan Oil, Gas And Metals National Corporation: "Geomechancial Modelling and Simulations of Wellbore Deformation and Stability during the Nankai Trough Methane Gas Production Trial," 1st November 2010 – 31st March 2011
- [67] Tokyo Gas: PI "Soil pipeline interaction in paved ground", 1st October 2011 February 2012
- [68] Japan Oil, Gas And Metals National Corporation: "Geomechancial Modelling and Simulations of Wellbore Deformation and Stability during the Nankai Trough Methane Gas Production Trial," 1st July 2011 – 31st March 2012
- [69] **BP**: PI "City scale modelling of geothermal energy," 1st October 2012-31st September 2015
- [70] Thames Water: Co-I "Thames Water Lee Tunnel Project- Abbey Mills shaft," October 2011
- [71] **Crossrail**: Co-I "Stepney Green shaft monitoring", 2011
- [72] **Crossrail**: Co-I "Liverpool street sprayed concrete junction", 2011
- [73] **Cementation Skanska**: PI "Bevis Marks pile reuse monitoring," 2012
- [74] Southend on Sea Borough Council: "Slope monitoring using Fibre optics-Phase 2", 2012
- [75] Magpie Environmental Drilling Services-Arup "Shell Centre Thermal pile response test," 2012
- [76] Cementation Skanska: PI "Broadgate Minipile monitoring project," 2012
- [77] Vlaamse overhead: PI "Fibre optics monitoring of railway retaining wall," 2012
- [78] Arup, PI "Deep Geomechanics matching fund with EPSRC Case studentship," October 2012 August 2015
- [79] Halcrow, PI "Assessment and retrofit of non-compliant sections of London Underground Tunnels matching fund with EPSRC Case studentship," October 2012 August 2015
- [80] Arup, PI "Improving the efficiency of interpreting monitoring data matching fund with EPSRC Case studentship," October 2012 – August 2015
- [81] **ITM-Soil** "PIV software development," 2012
- [82] **Crossrail** "Liverpool street station monitoring", 2013
- [83] Crossrail "Paddington Station monitoring", 2012

- [84] Wentworth House Partnership "City Road Pile testing monitoring," 2012
- [85] Crossrail "Postoffice tunnel monitoring," 2012
- [86] National Grid "Tunnel lining monitoring," 2013
- [87] National Grid "Computer vision tunnel inspection system development," 2013
- [88] London Underground "Smart Plank WSN project," 2013
- [89] Virgina Tech "Thermal pile testing," 2013
- [90] Japan Oil, Gas And Metals National Corporation: "Geomechancial Modelling and Simulations of Wellbore Deformation and Stability during the Nankai Trough Methane Gas Production Trial," December 2012 June 2013
- [91] Tokyo Gas: PI "Soil pipeline interaction constitutive modelling", 1st October 2012 February 2013
- [92] Japan Oil, Gas And Metals National Corporation: "Geomechancial Modelling and Simulations of Wellbore Deformation and Stability during the Nankai Trough Methane Gas Production Trial," March 2014 June 2014
- [93] Tokyo Gas: PI "Soil pipeline", 1st October 2013 February 2014
- [94] Canary Wharf Ltd. "Newfoundland FO monitoring project
- [95] Arup "Shell Centre FO monitoring project"
- [96] Cementation Skanska "Farringdon FO monitoring project
- [97] Arup "London Embassy FO monitoring project"
- [98] Arup, PI "Life Cycle Analysis of Civil Infrastructure," October 2013 September 2016
- [99] Samsung, "Intelligent monitoring and safety management system for Li-ion Batteries,
- [100] Tokyo Gas: PI "Soil pipeline", 1st October 2014 February 2015
- [101] Arup "Newfoundland FO monitoring project", February 2014 May 2014
- [102] Yunnan Fusheng Zn & Au Co Ltd "WSN for gas sensing" March 2014-February 2015
- [103] **CERN** "Fibre optics monitoring of CERN tunnels," March 2014-December 2014
- [104] Integrity Insitu "Pressuremeter test code development" November 2014-March 2015
- [105] Integrity Insitu "PhD studentship" January 2015-December 2017
- [106] Japan Oil, Gas And Metals National Corporation: "Study on wellbore stability and reinforcement of unconsolidated formation," January 2015 September 2015
- [107] **BG Group** "Petroleum Geomechanics", October 2015 September 2021
- [108] **BP** "Water injection in soft sands," January 2016-December 2021
- [109] **BP** "Filter cake," Co-I, January 2016-December 2021
- [110] Japan Oil, Gas And Metals National Corporation: "Study on wellbore stability and reinforcement of unconsolidated formation," January 2016 September 2016
- [111] Tokyo Gas: PI "Soil pipeline", 1st October 2015 February 2016
- [112] Arup, Co-I "Modelling concreting of piling and diaphragm walls" October 2016 March 2020
- [113] Aecom, PI "Singapore DTSS Phase 2", June 2015
- [114] Attorney General of Washington "Runout simulations of the SR-530 landslide case," April-September 2016
- [115] Kleinfelder "USACE W91238-16-D-0019 Dam & Levee Safety Programs" November 2016 present

Publications

Books

- [B1] Mitchell, J.K. and Soga, K. (2005) Fundamentals of Soil Behavior, 3rd Edition, John Wiley and Sons, May 2005, 592pp.
- [B2] Soga, K., Kumar, K., Biscontin, G. and Kuo, M. (editors) (2014) Geomechanics from Micro to Macro Proceedings of the TC105 ISSMGE International Symposium on Geomechanics from Micro to Macro, IS-Cambridge 2014, CRC Press, 1700pp.
- [B3] Mair, R.J., Soga, K., Jin, Y., Parlikad A.K. and Schooling, J.M. (editors) (2016) Transforming the Future of Infrastructure through Smarter Information: Proceedings of the International Conference on Smart Infrastructure and Construction, ICE Publishing, 800pp.
- [B4] Rodenas-Herráiz, D., Soga, K., Fidler, P. and de Battista, N. (2016) Wireless Sensor Networks for Civil Infrastructure Monitoring - A Best Practice Guide, ICE Publishing, 208pp.
- [B5] Kechavarzi, C., Soga, K., de Battista, N, Pelecanos, L., Elshafie, M. and Mair, R.J. (2016) Distributed Optical Fibre Sensing for Monitoring Geotechnical Infrastructure - A Practical Guide, ICE Publishing, 192pp.

Journal Papers, Technical Notes and Special Publication Papers

- [J1] Kamon, M., Soga, K., Kiyama, M. and Inoue, K. (1989) : "The Appearance characteristics of fecal pellets in marine clay layers in Osaka Bay and the relationship to geotechnical properties," *Soils and Foundations (Japanese version)*, Vol. 29, No. 2, pp. 181-189
- [J2] Akai, K., Kamon, M., Sano, I. and Soga, K. (1991) : "Long-term consolidation characteristic of diluvial clay in Osaka Bay," Soils and Foundations, Vol. 31, No.4, pp. 61-74
- [J3] Nakagawa, K., Soga, K. and Mitchell, J.K. (1996) : "Pulse transmission system for measuring wave propagation in soils," *Journal of Geotechnical and Geoenvironmental Engineering*, American Society of Civil Engineers, Vol. 122, No. 4, pp. 302-308
- [J4] Soga, K. and Mitchell, J.K. (1996) : "Rate-dependent deformation of structured natural clays," *Geotechnical Special Publication No. 61*, American Society of Civil Engineers, pp. 243-257
- [J5] Nakagawa, K., Soga, K. and Mitchell, J.K. (1997) : "Observation of the Biot compression wave of the second kind in granular soils," *Géotechnique*, Vol. 47, No. 1, pp. 133-147.
- [J6] Nakagawa, K., Soga, K. and Mitchell, J.K. (1997) : "Closure : Pulse transmission system for measuring wave propagation in soils," *Journal of Geotechnical and Geoenvironmental Engineering*, American Society of Civil Engineers, Vol. 123, No. 9, pp.884
- [J7] Soga, K. (1998) : "Soil Liquefaction effects observed in the Kobe Earthquake of 1995," Proceedings of ICE-Geotechnical Engineering, January, pp. 34 – 51
- [J8] Komiya, K., Soga, K., Akagi, H. Hagiwara, T. and Bolton, M.D. (1999) : "Finite element modelling of excavation and advancement processes of a shield tunnelling machine", *Soils and Foundations*, Vol. 39, No.3, pp. 37-52.
- [J9] Sugiyama, T., Hagiwara, T., Nomoto, T., Nomoto, M., Ano, Y., Mair, R.J., Bolton, M.D. and Soga, K. (1999) : "Observations of ground movements during tunnel construction by slurry shield method at the Docklands light railway Lewishman extension – East London," *Soils and Foundations*, Vol. 39, No.3, pp. 99-112.
- [J10] Carrier, M.B. and Soga, K. (1999) : "A four terminal measurement system for measuring the dielectric properties of clay at low frequencies", *Engineering Geology*, Vol.53, No.2, pp.115-123
- [J11] Ellis, E.A., Soga, K., Bransby, M.F. and Sato, M. (2000) : "Resonant column testing of sands with different viscosity pore fluids", *Journal of Geotechnical and Geoenvironmental Engineering*, American Society of Civil Engineers, Vol. 126, No. 1, pp. 10-17
- [J12] Yimsiri, S. and Soga, K. (2000) "Micromechanics-based stress-strain behaviour of soils at small strains", Géotechnique, Vol. 50, No.5, pp. 559-571
- [J13] Kechavarzi, C., Soga, K. and Wiart, P. (2000) : "Multispectral image analysis method to determine dynamic fluid saturation distribution in two-dimensional three-phase flow laboratory experiments," *Journal of Contaminant Hydrology*, Vol. 46, No.3-4, pp. 265-293
- [J14] Nakagawa, K., Soga, K. and Mitchell, J.K. (2001) : "Authors' reply; Observation of Biot compressional wave of the second kind in granular soils," *Géotechnique*, Vol. 51, No. 1
- [J15] Jafari, M.R., Au, S.K.A., Soga, K., Bolton, M.D. and Komiya, K. (2001) : "Fundamental laboratory investigation of compensation grouting in clays," *Geotechnical Special Publications No. 113*, American Society of Civil Engineers, pp. 445-459
- [J16] Kobayashi, I., Soga, K., Iizuka, A., Ohta, H. and Dalton, C. (2001) : "Effect of pore water migration on self-boring pressuremeter strength," *Journal of Applied Mechanics*, Japan Society of Civil Engineers, Vol. 4, pp. 285-294
- [J17] Ratnam, S., Soga, K. and Whittle, R. (2001) : "Revisiting Hvorslev's intake factors using the finite element method," Géotechnique, Vol. 51, No. 7, pp.641-645

- [J18] Bowman, E.T., Soga, K. and Drummond, T. (2001) : "Particle shape characterization using fourier analysis," Géotechnique, Vol. 51, No. 6, pp. 545-554
- [J19] Lee, S.W., Bolton, M.D., Mair, R.J., Hagiwara, T., Soga, K. and Dasari, G. (2001) : "Centrifuge modelling of injection near tunnel lining," *The International Journal of Physical Modelling in Geotechnics*, Vol. 1, No. 1, pp. 9-24
- [J20] Cerasi, P. and Soga, K. (2001) : "Failure modes of drilling fluid filter cake," Géotechnique, Vol. 51, No. 9, pp. 777-786
- [J21] Komiya, K., Soga, K., Akagi, H., Jafari, M.R. and Bolton, M.D. (2001) : "Soil consolidation associated with grouting during shield tunnelling in soft clayey ground," *Géotechnique*, Vol. 51, No. 10, pp. 835-847
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- [J23] Ratnam, S., Soga, K., Mair, R.J. and Whittle, R.W. (2002) : "Self-boring pressuremeter permeameter measurements in Bothkennar clay," *Géotechnique*, Vol. 52, No. 1, pp. 55-60
- [J24] Kechavarzi, C. and Soga, K. (2002) : "Determination of water saturation using miniature resistivity probes during intermediate scale and centrifuge multiphase flow laboratory experiments," ASTM Geotechnical Testing Journal, Vol. 25, No. 1, pp. 95-103
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- [J27] Saenton, S., Illangasekare, T.H., Soga, K. and Saba, T. (2002) : "Effects of source zone heterogeneity on surfactant enhanced NAPL dissolution and resulting remediation end-points," *Journal of Contaminant Hydrology*, Vol. 59, pp. 27-44
- [J28] Yimsiri, S. and Soga, K. (2002) : "Application of micromechanics model to study anisotropy of soils at small strains," Soils and Foundations, Vol. 42, No.5, pp.15-26
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