**Dr Sam Stanier MEng PhD**

University Senior Lecturer in Civil Engineering

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**EDUCATION**

2011 – Ph.D. in Geotechnical Engineering – University of Sheffield, UK

2007 – M.Eng. (1st Class) in Civil Engineering – University of Sheffield, UK

**APPOINTMENTS**

2018 to present – University Senior Lecturer in Civil Engineering, University of Cambridge, UK

2017 to 2018 – ARC DECRA Fellow, Centre for Offshore Foundation Systems (COFS), University of Western Australia (UWA), Australia

2011 to 2017 – Research Associate & Research Fellow, COFS, UWA, Australia

**RESEARCH INTERESTS**

* Offshore geomechanics (e.g. pipelines, sliding foundations and jack-ups)
* Novel site investigation sensors (e.g. shallow penetrometers and parkable piezoprobe)
* Image-based deformation measurement techniques
* Large deformation numerical analysis
* Strain localisation in strain-softening-hardening materials
* The whole-life response of geotechnical structures

**AWARDS AND HONOURS**

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| 2020 | Canadian Geotechnical Journal ‘Del Fredlund Award’ for J18 (see publication list) |
| 2020 | Canadian Geotechnical Journal ‘Editor’s Choice’ for J33 (see publication list) |
| 2018 | ICE Telford Premium for the International Journal of Physical Modelling in Geotechnics |
| 2017 | Australian Research Council Discovery Early Career Researcher Award (ARC DECRA) Fellowship. *One of only two hundred awarded nationally in all fields of research and the only one in the field of geotechnical engineering in the year of the award.* |
| 2016 | Canadian Geotechnical Journal ‘Editor’s Choice’ for J18 (see publication list) |
| 2013 | Australian Gas Innovation Award (Pre-Commercial) – Shallow penetrometers |
| 2007 | Jacobs Babtie Prize for ‘Best Individual Project’ – School of Civil and Structural Engineering, University of Sheffield |
| 2007 | Institution of Civil Engineers (ICE) Student Prize – School of Civil and Structural Engineering, University of Sheffield |

**OTHER APPOINTMENTS AND AFFILIATIONS**

* Editorial board member for Canadian Geotechnical Journal and the International Journal for Physical Modelling in Geotechnics since 2018 and 2020, respectively.
* Regular reviewer for: *Géotechnique, Géotechnique Letters, ASCE Journal of Geotechnical and Geoenvironmental Engineering, Canadian Geotechnical Journal, Computers and Geotechnics, ASTM Geotechnical Testing Journal, ICE Geotechnical Engineering, International Journal of Physical Modelling in Geotechnics and Environmental Geotechnics…*
* Review editor and session chair for the 8th International Conference on Physical Modelling in Geotechnics.
* Appointed as an Adjunct Research Fellow at the University of Western Australia in 2019.

**PUBLICATION SUMMARY**

Journal articles: 38 Conference articles: 18

Total citations: 925 Citations since 2015: 872 h-index: 16

*Published widely in leading journals in the field of geotechnical engineering, including:*

*8 articles in Géotechnique; 4 in Géotechnique Letters; 4 in Canadian Geotechnical Journal (two of which were named as an ‘Editor’s Choice’ for 2016 and 2020); 2 in Computers and Geotechnics; 4 in ASCE Journal of Geotechnical and Geoenvironmental Engineering; and 6 in the International Journal of Physical Modelling in Geotechnics.*

**PUBLICATIONS**

**Key: \* denotes manuscript published since appointment**

**JOURNAL ARTICLES**

|  |  |
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| J38\* | Ragni, R., Bienen. B., O’Loughlin, C.D., **Stanier, S.A.**, Cassidy, M.J. & Morgan, N. (2020). Observations of the effects of a clay layer on suction bucket installation in sand. Journal of Geotechnical and Geoenvironmental Engineering, 146(5): 04020020. |
| J37\* | Hu, P., Cassidy, M.J., Sahdi, F. & **Stanier, S.A.** (2020). Breakout force required for jack-up spudcan extraction from sand-over-clay seabeds. Soils and Foundations, 60(2): 413-424. doi: 10.1016/j.sandf.2020.03.004. |
| J36\* | Eichorn, G.N., Bowman, A., Haigh, S.K. & **Stanier, S.A.** (2020). Low-cost digital image correlation and strain measurement for geotechnical applications. Strain, e12348. doi: 10.1111/str.12348. |
| J35\* | Zhou, Z., O’Loughlin, C.D., White, D.J. & **Stanier, S.A.** (2020). Improvements in plate anchor capacity due to cyclic and maintained loads combined with consolidation. Géotechnique, 70(8): 732-749. doi: 10.1680/jgeot.19.TI.028. |
| J34\* | Schneider, M.A., **Stanier, S.A.**, White, D.J. & Randolph, M.F. (2020). Shallow penetrometer tests-theoretical and experimental modelling of the rotation stage. Canadian Geotechnical Journal, 57(4): 580-594. doi: 10.1139/cgj-2018-0656. |
| J33\* | Schneider, M.A., **Stanier, S.A.**, White, D.J. & Randolph, M.F. (2020). Shallow penetrometer tests-theoretical and experimental modelling of penetration and dissipation stages. Canadian Geotechnical Journal, 57(4): 568-579. doi: 10.1139/cgj-2018-0656. |
| J32\* | Schneider, M.A., **Stanier, S.A.**, White, D.J. & Randolph, M.F. (2019). Apparatus for measuring pipe-soil interaction behavior using shallow ‘pipe-like’ shallow penetrometers. Geotechnical Testing Journal, 43(3). doi: 10.1520/GTJ20180293. |
| J31\* | O’Loughlin, C.D., Zhou, Z., **Stanier, S.A.** & White, D.J. (2020). Load-controlled cyclic T-bar tests: a new method to assess the combined effects of cyclic loading and consolidation. Géotechnique Letters, 9(3): 1-22. doi: 10.1680/jgele.19.00030. |
| J30\* | Ragni, R., Bienen, B., **Stanier, S.A.**, O’Loughlin, C.D. & Cassidy, M.J. (2020). Observations during suction bucket installation in sand. International Journal of Physical Modelling in Geotechnics, 20(3): 132-149. doi: 10.1680/jphmg.18.00071. |
| J29\* | Teng, Y., **Stanier, S.A.** & Gourvenec, S.M. (2019). Mechanisms beneath rectangular shallow foundations on sands: vertical loading. Géotechnique, available ahead of print online. doi: 10.1680/jgeot.18.P.058. |
| J28\* | Schneider, M.A., **Stanier, S.A.**, Chatterjee, S., White, D.J. & Randolph, M.F. (2019). The parkable piezoprobe for determining cv and strength – modelling and interpretation techniques. Géotechnique, 69(5): 458-469. doi: 10.1680/jgeot.18.P.004. |
| J27\* | **Stanier, S.A.** & White, D.J. (2019). Enhancement of bearing capacity from consolidation: due to changing strength or failure mechanism? Géotechnique, 69(2): 166-173. doi: 10.1680/jgeot.17.t.030. |
| J26 | O’Loughlin, C.D., Cocjin, M.L., Gourvenec, S.M. & **Stanier, S.A.** (2018). A simple approach to multi-degree-of-freedom loading in a geotechnical centrifuge. Geotechnical Testing Journal, 42. doi: 10.1520/GTJ20180037. |
| J25 | Hambleton, J.P. & **Stanier, S.A.** (2017). Predicting wheel forces using bearing capacity theory for general planar loads. International Journal of Vehicle Performance, doi: 10.1504/IJVP.2017.10002328. |
| J24 | Ullah, S.N., **Stanier, S.A.**, White, D.J. & Hu, Y. (2017). Foundation punch-through in clay with sand: centrifuge modelling. Géotechnique, 67(10): 870-889, doi: 10.1680/jgeot.16.P.100. |
| J23 | Teng, Y., **Stanier, S.A.** & Gourvenec, S. (2017). Synchronised multi-scale image analysis of soil deformations. International Journal of Physical Modelling in Geotechnics, 17(1): 53-71. doi:10.1680/jphmg.15.00058. |
| J22 | Ullah, S.N., **Stanier, S.A.**, White, D.J. & Hu, Y. (2016). Foundation punch-through in clay with sand: analytical modelling. Géotechnique, 67(10):870-889, doi:10.1680/jgeot.16.P.101. |
| J21 | Ragni, R., Wang, D., Mašín, D., Bienen, B., Cassidy, M.J. & **Stanier, S.A.** (2016). Numerical modelling of the effects of consolidation on jack-up spudcan penetration. Computers and Geotechnics, 78: 25-37. doi:10.1016/j.compgeo.2016.05.002. |
| J20 | Ullah, S.N, Hu, Y., **Stanier, S.A.** & White, D.J. (2016). Lateral boundary effects in centrifuge foundation tests. International Journal of Physical Modelling in Geotechnics, ahead of print online, doi:10.1680/jphmg.15.00034. |
| J19 | **Stanier, S.A.**, Dijkstra, J., Lesniewska, D., Hambleton, J., White, D.J. & Muir Wood, D. (2016). Vermiculate artefacts in image analysis of granular materials. Computers and Geotechnics, 72: 100-113, doi:10.1016/j.compgeo.2015.11.013. |
| J18 | **Stanier, S.A.**, Blaber, J., Take, W.A. & White, D.J. (2016). Improved image-based deformation measurement for geotechnical applications. Canadian Geotechnical Journal, 53: 1-13, doi:10.1139/cgj-2015-0253. |
| J17 | Hu, P., **Stanier, S.A.**, Wang, D. & Cassidy, M.J. (2015). Effect of footing shape on penetration in sand overlying clay. International Journal of Physical Modelling in Geotechnics, doi:10.1680/jphmg.15.00013. |
| J16 | Hu, P., **Stanier, S.A.**, Wang, D. & Cassidy, M.J. (2015). A comparison of full profile prediction methods for a spudcan penetrating sand overlying clay. Géotechnique Letters, 5(3): 131-139, doi:10.1680/jgele.15.00051. |
| J15 | Hu, P., Wang, D., **Stanier, S.A.** & Cassidy, M.J. (2015). Assessing the punch-through hazard of a spudcan on sand overlying clay. Géotechnique, 65(11): 883-896, doi:10.1680/jgeot.14.P.097. |
| J14 | Bienen, B., Ragni, R., Cassidy, M.J. & **Stanier, S.A.** (2015). Effects of consolidation under a penetrating footing in carbonate silty clay. Journal of Geotechnical and Geoenvironmental Engineering, 141(9): 1-15, doi:10.1061/(ASCE)GT.1943-5606.0001339. |
| J13 | **Stanier, S.A.**, White, D.J., Chatterjee, S., Brunning, P. & Randolph, M.F. (2015). A tool for ROV-based seabed friction measurement. Applied Ocean Research, 50: 155-162, doi:10.1016/j.apor.2015.01.016. |
| J12 | Hambleton, J.P., **Stanier, S.A.**, Gaudin, C. & Todeshkejoei, C. (2014). Analysis of installation forces for helical piles in clay. Australian Geomechanics Society, 49(4): 73-80. |
| J11 | Hambleton, J.P., **Stanier, S.A.**, White, D.J. & Sloan, S.W. (2014). Modelling ploughing and cutting processes in soils. Australian Geomechanics Society, 49(4): 147-156. |
| J10 | Ullah, S.N., Hu, Y., White, D.J. & **Stanier, S.A.** (2014). Lateral boundary effect in centrifuge tests for spudcan penetration in uniform clay. Applied Mechanics and Materials, 553: 458-463, doi:10.4028/www.scientific.net/AMM.553.458. |
| J9 | **Stanier, S.A.**, Ragni, R., Bienen, B., & Cassidy, M.J. (2014). Observing the effects of sustained loading on a spudcan footing in clay. Géotechnique, 64(11): 918-926, doi:10.1680/geot.1-4.003. |
| J8 | **Stanier, S.A.** & White, D.J. (2014). Shallow penetrometer penetration resistance. ASCE Journal of Geotechnical and Geoenvironmental Engineering, 141(3): 1-12, doi:10.1061/(ASCE)GT.1943-5606.0001257. |
| J7 | Ullah, S.N., Hu, Y., White, D.J. & **Stanier, S.A.** (2014). LDFE study of bottom boundary effects in foundation model tests. International Journal of Physical Modelling in Geotechnics, 14(3): 80-87, doi:10.1680/ijpmg.14.00004. |
| J6 | Hu, P., Wang, D., Cassidy, M.J. & **Stanier, S.A.** (2014). Predicting the resistance profile of a spudcan penetrating sand overlying clay. Canadian Geotechnical Journal, 51(10): 1151-1164, doi:10.1139/cgj-2013-0374. |
| J5 | Hu, P., **Stanier, S.A.**, Cassidy, M.J. & Wang, D. (2014). Predicting the peak punch-through resistance of a spudcan penetrating sand overlying clay. ASCE Journal of Geotechnical and Geoenvironmental Engineering, 140(2): 1-12, doi:10.1061/GT.1943-5606.0001016. |
| J4 | **Stanier, S.A.** & White, D.J. (2013). Improved image based deformation measurement for the centrifuge environment. Geotechnical Testing Journal, 36(6): 915-927, doi:10.1520/GTJ20140044. |
| J3 | **Stanier, S.A.**, Black, J.A. & Hird, C.C. (2013). Modelling helical screw piles in clay and design implications. Geotechnical Engineering, 167(5): 447-460, doi:10.1680/geng.13.00021. |
| J2 | **Stanier, S.A.** & Tarantino, A. (2013). An approach for predicting the stability of vertical cuts in cohesionless soils above the water table. Journal of Engineering Geology, 148(5): 98-108, doi:10.1016/j.enggeo.2013.03.012. |
| J1 | **Stanier, S.A.**, Black, J.A. & Hird, C.C. (2012). Enhancing accuracy and precision of transparent synthetic soil modelling. International Journal of Physical Modelling in Geotechnics, 12(4): 162-175, doi:10.1680/ijpmg.12.00005. |

**CONFERENCE ARTICLES**

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| C18\* | Hambleton, J.P. & **Stanier, S.A.** (2019). Linking the installation response of screw piles to soil strength and ultimate capacity. ISSPEA 2019, Dundee, UK. |
| C17 | Randolph, M.F., **Stanier, S.A.**, O’Loughlin, C.D., Chow, S.H., Bienen. B., Doherty, J.P. Mohr, H., Ragni, R., Schneider, M.A., White, D.J. & Schneider, J.A. (2018). Penetrometer equipment and testing techniques for offshore design of foundations, anchors and pipelines. 4th International Symposium on Cone Penetration Testing (CPT'18), Delft, The Netherlands. |
| C16 | Ragni, R., Bienen, B., **Stanier, S.A.**, Cassidy, M.J. & O’Loughlin, C.D. (2018). Visualisation of mechanisms governing suction bucket installation in dense sand. 9th International Conference on Physical Modelling in Geotechnics, ICPMG 2018, London, UK. |
| C15 | Teng, Y., **Stanier, S.A.** & Gourvenec, S.M. (2017). Analysis of failure mechanisms in silica and carbonate sands beneath a strip foundation under vertical loading. ASME 2017 36th International Conference on Ocean, Offshore and Arctic Engineering, Madrid, Spain. |
| C14 | White, D.J., **Stanier, S.A.**, Schneider, M.A., O’Loughlin, C.D., Chow, S.H., Randolph, M.F., Draper, S.D., Mohr, H & Morton, J. (2017). Remote intelligent geotechnical seabed surveys – technology emerging from the RIGSS JIP. 2017 SUT OSIG Conference, London, UK. |
| C13 | O’Loughlin, C.D., White, D.J. & **Stanier, S.A.** (2017). Plate anchors for mooring floating facilities – a view towards unlocking cost and risk benefits. 2017 SUT OSIG Conference, London, UK. |
| C12 | Gourvenec, S.G., **Stanier, S.A.** & White, D.J. (2017). Whole-life assessment of subsea shallow foundation capacity. 2017 SUT OSIG Conference, London, UK. |
| C11 | Hu, P., Cassidy, M. J., Wang, D. & **Stanier, S. A.** (2015). Spudcan penetration analysis for three case histories in sand overlying clay. Proceedings of Jack-Up Conference 2015. London, UK. |
| C10 | O’Loughlin, C.D., White, D.J. & **Stanier, S.A.** (2015). Novel anchoring solutions for FLNG-opportunities driven by scale. Offshore Technology Conference, Houston, Texas, USA. |
| C9 | Kashizadeh, E., Hambleton, J.P. & **Stanier, S.A.** (2014). A numerical approach for modelling the ploughing process in sands. Proceedings of the 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics, Kyoto, Japan. |
| C8 | Todeshkejoei, C., Hambleton, J.P., **Stanier, S.A.** & Gaudin, C. (2014). Modelling installation of helical anchors in clay. Proceedings of the 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics, Kyoto, Japan. |
| C7 | **Stanier, S.A.**, Breen, J. & White, D.J. (2014). A compact high-speed image capture system for a drum centrifuge. Proceedings of the 8th International Conference on Physical Modelling in Geotechnics, Perth, Australia. pp 241-246. |
| C6 | Ullah, S.N., **Stanier, S.A.**, White, D.J. & Hu, Y. (2014). Using the ‘step zero’ approach to design a centrifuge modelling program. Proceedings of the 8th International Conference on Physical Modelling in Geotechnics, Perth, Australia, pp 397-403. |
| C5 | Ullah, S.N., Hu, Y., White, D.J. & **Stanier, S.A.** (2013). Lateral boundary effect in centrifuge tests for spudcan penetration in uniform clay. Proceedings of the 1st Australasian Conference on Computational Mechanics (ACCM 2013), Sydney, Australia. |
| C4 | **Stanier, S.A.**, Hu, P., Cassidy, M.J. & Wang, D. (2012). Calibration of a model to predict the peak punch-through penetration resistance of a spudcan on sand overlying clay. Proceedings of the 2nd European Conference on Physical Modelling in Geotechnics (Eurofuge 2012), Delft, Netherlands. |
| C3 | **Stanier, S. A.** & Tarantino, A. (2010). Active earth pressure in ‘cohesionless’ unsaturated soils using bound theorems of plasticity. Proceedings of the 5th International Conference on Unsaturated Soils, Barcelona, Spain, pp 1081-1086. |
| C2 | Hird, C.C. & **Stanier, S.A.** (2010). Modelling helical screw piles in clay using a transparent soil. Proceedings of the 7th International Conference on Physical Modelling in Geotechnics, Zurich, Switzerland. pp 769-774. |
| C1 | Black, J.A., **Stanier, S.A.** & Clarke, S.D. (2009). Shear wave velocity measurement of Kaolin during undrained unconsolidated triaxial compression. Proceedings of the 62nd Canadian Geotechnical Conference, Halifax, Canada. |

**GRANTS**

**Total: ~£1.77M (~$3.24M AUD) – P: Principal investigator; C: Co-investigator**

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| 2020 | £60k | **(P)** | Export cable stability for offshore wind turbine arrays. CSIC Internal Funding. Applicant(s): **Stanier, S.A.** & Viggiani, G. |
| 2019 | £18k | **(P)** | Shallow penetrometers: the next generation. CSIC Internal Funding. Applicant(s): **Stanier, S.A.** |
| 2019 | $54 AUD | **(C)** | Application of RIGSS JIP penetrometer system on Mozambique survey samples provided by Fugro AG. Applicants: Mohr, H., **Stanier, S.A.** & White, D.J. |
| 2019 | $83k AUD | **(C)** | Application of RIGSS JIP penetrometer system on Browse survey samples provided by Woodside. Applicants: Mohr, H., **Stanier, S.A.** & White, D.J. |
| 2019 | $100k AUD | **(C)** | Application of RIGSS JIP penetrometer system on Scarborough survey samples provided by Woodside. Applicants: Mohr, H., **Stanier, S.A.** & White, D.J. |
| 2018 | $61k AUD | **(P)** | Application of RIGSS JIP penetrometer system on West African samples provided by Woodside . Applicant(s): **Stanier, S.A.** &Mohr, H. |
| 2018 | $443k AUD | **(C)** | Design of suction piles for submarine systems under combined loading and deep water geotechnical conditions. Instituto Mexicano del Petróleo (IMP). Applicant(s): Randolph, M.F., Gaudin, C., O'Loughlin, C.D., **Stanier, S.A.** & Tian, Y. |
| 2017 | $280k AUD | **(C)** | A 21st century laboratory testing device for geotechnical engineering. ARC Discovery Project DP180100973. Applicant(s): Lehane, B.M., Doherty, J., **Stanier, S.A.** & White, D.J. |
| 2017 | $220k AUD | **(P)** | Deployment of RIGSS JIP penetrometer system on the Total Absheron Survey. Applicant(s): **Stanier, S.A.**, White, D.J., Ragni, R. & Mohr, H. |
| 2017 | $110k AUD | **(P)** | Deployment of RIGSS JIP penetrometer system on the Shell Crux Survey. Applicant(s): **Stanier, S.A.** &White, D.J. |
| 2017 | $360k AUD | **(P)** | Unlocking the changing strength of fine-grained soils in numerical analysis. ARC DECRA Fellowship DE170100119. Applicant(s): **Stanier S.A.** |
| 2014 | $975k AUD | **(C)** | Remote Intelligent Geotechnical Seabed Surveys (RIGSS) JIP. Applicant(s): White, D.J., Randolph, M.F., Cheng, L., O’Loughlin, C.D., **Stanier. S.A.**, & Draper, S. |
| 2013 | $20k AUD | **(P)** | Development of shallow penetrometer technology for Remotely Operated Vehicle based seabed property measurement. Applicant(s): **Stanier, S.A.** |
| 2012 | $65k AUD | **(C)** | Seabed friction on carbonate soils - ROV mounted data gathering. Applicant(s): White, D.J., Randolph, M.F. & **Stanier, S.A.** |
| 2012 | $300k AUD | **(C)** | A national facility for in-situ testing of soft soils. ARC LIEF Grant LE130100028. Applicant(s): Sloan, S., Randolph, M.F., Carter, J., Sheng, D., Cassidy, M.J., Indraratna, B., White, D.J., Khalili, N., **Stanier, S.A.** & O’Loughlin, C.D. |

**INVITED TALKS**

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| 2019 | Freeware PIV/DIC for geotechnical modelling: new advances and applications using GeoPIV-RG’. TC104 (Physical Modelling) technical committee workshop at the XVII European Conference on Soil Mechanics and Geotechnical Engineering in Reykjavik |
| 2019 | Soil strength: a moving target. ICE Cambridge Chapter Technical Evening, Cambridge, UK. |
| 2019 | Soil strength: a moving target. University of Oxford, Oxford, UK. |
| 2018 | Soil strength: a moving target. University of Cambridge, Cambridge, UK. |
| 2018 | Soil strength: a moving target in numerical analysis. Northwestern University, Chicago, USA. |
| 2017 | The first deployment of the RIGSS JIP shallow penetrometers. Society for Underwater Technology (SUT) Offshore Site Investigation and Geotechnics Perth (OSIGp) Movie Night, Perth, Australia. |
| 2017 | The whole-life geotechnical capacity of the seabed: can we reduce the size of foundations and anchors? Woodside, Perth, Australia. |
| 2016 | RIGSS, DIGS and safely engineering around geohazards. SUT Evening Technical Meeting, Perth, Australia. |
| 2014 | Interpretation of shallow penetrometer measurements for deep-water locations. 2014 Lloyd’s Register Foundation Oration, Perth, Australia. |
| 2010 | Failure mechanics of helical screw piles using transparent soil. 9th BGA Annual Conference, ICE Headquarters, One Great George Street, London, UK. |

**ASSOCIATED CO-WORKERS (SINCE APPOINTMENT)**

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| Dr. Pan Hu | Lecturer at the University of Western Sydney and a former PhD student |
| Dr. Shah Neyamat Ullah | Lecturer at Central Queensland University and a former PhD student |
| Dr. Mark Schneider | Lecturer at ETH Zurich and a former PhD student |
| Dr. Henning Mohr | Post-doctoral researcher at UWA under my supervision and current collaborator |
| Dr. Zefeng Zhou | Post-doctoral researcher at UWA and a former PhD student |
| Dr. Yining Teng | Engineer at NGI, Oslo and a former PhD student |
| Dr. Raffaele Ragni | Engineer at NGI, Perth and a former post-doctoral researcher under my supervision |
| Geoff Eichorn | Cambridge PhD student and current collaborator |
| Dr. April Bowman | Post-doctoral researcher at University of Boulder Colorado |
| Dr. Zhenhao Shi | Research Assistant Professor at Tongji University and current collaborator |
| Prof. Mark Randolph | Former colleague at UWA and current collaborator |
| Assoc. Prof Britta Bienen | Former colleague at UWA and current collaborator |
| Prof. Mark Cassidy | Former colleague at UWA and current collaborator |
| Assoc. Prof. Conleth O’Loughlin | Former colleague at UWA and current collaborator |
| Dr. Fauzan Sahdi | Former colleague at UWA and current collaborator |
| Prof. David White | Former supervisor now at the University of Southampton and current collaborator |
| Prof. Susan Gourvenec | University of Southampton and current collaborator |
| A/Prof. James Hambleton | Louis Berger Junior Professor at Northwestern University |

**RECENT PUBLICATIONS**

**Paper 1 - Submitted**

Singh, V., **Stanier, S.A.**, Bienen, B. & Randolph, M.F. (Under Review). Modelling the behaviour of sensitive clays experiencing large deformations using non-local regularisation techniques. Submitted to Computers and Geotechnics.

Synopsis: Co-authored with my current PhD student Vikram Singh and former colleagues at UWA, this paper explores issues with the current state-of-the-art in ultra large deformation numerical modelling of geotechnical phenomena involving soft sensitive clay soils. The paper highlights a range of issues that are at the heart of my current research activities, including calibration of constitutive models using image-based methods and the development of new constitutive model features.

**Paper 2 - Submitted**

Mohr, H., **Stanier, S.A.**, White, D.J. & Kuo, M. (Under Review). The variability of marine sediment erodibility with depth: Centimetric scale effects detected from portable erosion flume tests. Submitted to Applied Ocean Research.

Synopsis: Co-authored with a former post-doctoral researcher under my supervision, Dr. Henning Mohr, Prof. David White and Dr. Matthew Kuo, formerly of Cambridge University and now working for Woodside. This paper highlights the importance of sample orientation in scour measurements for seabed sediments, highlighting that depth-averaging by performing scour tests perpendicular to the sedimentation direction (which is a common practice) can lead to significant conservatism and unnecessary scour remediation costs. The apparatus utilised in this paper is being procured via NRFIS in order to continue this research with recently recruited post-doctoral Research Associate Haitao Lan (starting September 28th 2020) and PhD student Maria Chalakatevaki.

**Paper 3 - Draft**

Singh, V., **Stanier, S.A.**, Bienen, B. & Randolph, M.F. (Draft). Calibration of strain-softening constitutive model parameters from full-field deformation measurements. Submitted to Canadian Geotechnical Journal.

Synopsis: Co-authored with my current PhD student Vikram Singh and former colleagues at UWA, this paper explores the potential for the development of image-based constitutive model calibration techniques for strain-softening constitutive models. This work is continuing here in a Cambridge and is forming a significant part of my research portfolio. I have recruited a PhD student (Jonathan Smith, former CUED undergraduate) and instigated collaborations with Prof. Mark Girolami on this topic.