教师风采——郑敬宾

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郑敬宾，男，博士（海洋岩土工程方向），毕业于西澳大利亚大学海洋基础系统研究中心（Centre for Offshore Foundation Systems），主要从事海洋工程地质与岩土工程领域的研究。已在Geotechnique, Journal of Geotechnical and Geoenvironmental Engineering, Canadian Geotechnical Journal, Computers and Geotechniques等顶级和权威岩土期刊发表论文近10篇。

每年招收硕士生2~3人（岩土工程、土木工程、环境地质工程相关专业）

研究兴趣：自升式平台桩靴基础相关工程问题；原位静力触探测试；大变形有限元模拟；风电机基础

联系方式：

邮箱：zhengjingbin@ouc.edu.cn
电话：0532-66786396
地址：山东省青岛市崂山区松岭路238号中国海洋大学（崂山校区）环境科学与工程学院

教育与工作经历：

2017 – 至今： 中国海洋大学环境科学与工程学院，副教授

2017.5 – 2017.8：澳大利亚科廷科技大学，研究助理

2012 – 2017：西澳大利亚大学，助教

2012 – 2016：西澳大利亚大学，博士（海洋岩土工程方向）

2007 – 2011：同济大学，土木工程专业学士（隧道与地下工程方向）

科研项目：

2019 – 2021：国家自然科学基金青年科学基金，遗留桩坑对桩靴基础安装过程的影响及其评价方法研究，主持

2018 – 2020：山东省自然科学基金，安装和冲刷深度对自升式平台桩靴基础复合承载力的影响，主持

2017－2019：中国海洋大学，青年英才工程第三层次科研支持经费，主持

2019 – 2022：国家自然科学基金NSFC-山东联合基金重点项目，自升式平台桩靴基础的全工作周期稳定性分析，参与

2018－2021：国家重点研发计划，海底沉积物力学特性的原位测试装置，项目骨干

参与的工业界合作：

2018：中石化石油工程设计有限公司，埕岛油田移动平台插桩地质信息分析与评价系统

2012.2 – 2016.1：新加坡吉宝海事有限公司（Keppel Offshore & Marine Ltd），多层土中利用现场静力触探数据直接预测桩靴基础贯入阻力以及穿刺事故风险评估，

2013.11 – 2014.4：韩国大宇造船海洋株式会社（DSME：Daewoo Shipbuilding & Marine Engineering），自升式钻井平台建设过程中桩靴基础与土的相互作用

2013.1 – 2013.6：美国辉固麦克利兰海洋地质科学有限公司（Fugro-McClelland Marine Geosciences, Inc., USA），桩靴基础贯入黏土的工程实例分析

讲授课程：

本科生课程：《工程力学》

研究生课程：《高级土工测试技术》、《海洋岩土工程理论与设计》

论文发表情况：

国际期刊论文

[1] Hossain, M.S., **Zheng, J.**, Menzies, D., Meyer, L. & Randolph, M.F. (2014). Spudcan penetration analysis for case histories in clay. **Journal of Geotechnical and Geoenvironmental Engineering, ASCE**, 140(7): 04014034.

[2] **Zheng, J.**, Hossain, M.S. & Wang, D. (2015). Numerical modeling of spudcan deep penetration in three-layer clays. **International Journal of Geomechanics**, 15(6): 04014089.

[3] **Zheng, J.**, Hossain, M.S. & Wang, D. (2015). New design approach for spudcan penetration in nonuniform clay with an interbedded stiff layer. **Journal of Geotechnical and Geoenvironmental Engineering, ASCE**, 141(4): 04015003.

[4] Wang, D., Bienen, B., Nazem, M., Tian, Y., **Zheng, J.**, Pucker, T. & Randolph, M.F. (2015). Large deformation finite element analyses in geotechnical engineering. **Computers and Geotechnics**, 65: 104-114.

[5] Hossain, M.S., **Zheng, J.**, Huston, A. (2015). Effect of spudcan geometry on penetration and extraction resistance in clay. **Géotechnique**, 65(2): 147-154

[6] **Zheng, J.**, Hossain, M.S. & Wang, D. (2016). Prediction of spudcan penetration resistance profile in stiff-over-soft clays. **Canadian Geotechnical Journal**, 53(12): 1978-1990.

[7] **Zheng, J.**, Hossain, M.S. & Wang, D. (2017). Numerical investigation of spudcan penetration in multi-layer deposits with an interbedded sand layer. **Géotechnique**, 67(12): 1050-1066.

[8] **Zheng, J.**, Hossain, M.S. & Wang, D. (2018). Estimating spudcan penetration resistance in stiff-soft-stiff clay. **Journal of Geotechnical and Geoenvironmental Engineering, ASCE**, 144(3): 04018001.

[9] Wang, Z.L., Yao, J., Tian, N., **Zheng, J.** & Gao, P. (2018). Mechanical behavior and damage evolution for granite subjected to cyclic loading. **Advances in Materials Science and Engineering**, 4312494.

国内核心期刊论文

[1] **郑敬宾**，王志亮．单一和混杂钢纤维混凝土压缩特性研究[J]．混凝土，2010，4：61-68.

[2] **郑敬宾**，胡畔，王栋．复杂土层中自升式平台桩靴安装穿刺预测[J]．海洋工程，2018，36(3)：123-130.

国际会议论文

[1] **Zheng, J.**, Hossain, M. S. & Wang, D. (2012). 3D large deformation FE analysis of circular footing and spudcan on clay using CEL approach. Proc., 2nd International Symposium on Constitutive Modelling of Geomaterials, Beijing, 803-810.

[2] **Zheng, J.**, Hossain, M.S. & Wang, D. (2013). 3D large deformation FE analysis of spudcan and cone

penetration on three-layer clays. Proc., 23rd International Offshore and Polar Engineering Conference, Anchorage, Alaska.

[3] **Zheng, J.**, Hossain, M.S. & Wang, D. (2014). Large deformation finite element analysis of cone penetration on strain softening, rate dependent non-homogeneous clay. Proc., 3rd International Symposium on Cone Penetration Testing, Las Vegas, USA..

[4] **Zheng, J.**, Hossain, M.S. & Wang, D. (2014). CPT based direct design approach for spudcan penetration in non-uniform clay with an interbedded stiff layer. Proc., 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics, Kyoto, 895-900.

[5] Hossain, M.S., **Zheng, J.**, Safinus, S., Kim, Y., Won, J. H., Park, J-S. & Jun, M. J. (2015). Installation of spudcan foundation in layered clays: centrifuge test and numerical analysis. Proc., 23rd International Offshore and Polar Engineering Conference, Hawaii, USA.

[6] **Zheng, J.** & Wang, D. (2018). Numerical analysis of spudcan-footprint interaction using Coupled Eulerian-Lagrangian approach. Proc., China-Europe Conference on Geotechnical Engineering, Vienna, 458-462.

Dr. Jingbin Zheng

Qualifications

B.Eng Tongji, *Ph.D* W.Aust.

Contact Details

Email：zhengjingbin@ouc.edu.cn

Tel：+86-532-66786396

Address：College of Environmental Science and Engineering, 238 Songling Road, Qingdao 266100, China

Biography

Jingbin joined Ocean University of China as an Associate Professor in 2017, as a member of the team of Shandong Provincial Key Laboratory of Marine Environment and Geological Engineering and the College of Environmental Science and Engineering.

Jingbin worked as a research assistant at Curtin University of Technology, Australia and as a tutor at the University of Western Australia (UWA), after the completion of his PhD on “Numerical Modelling of Spudcan and Cone Penetration in Multi-Layer Soils” from the Centre for Offshore Foundation Systems at UWA in 2016.

Jingbin obtained his Bachelor’s degree, majoring in Civil Engineering, from Tongji University, China. He started his Ph.D study immediately after the completion of his undergraduate study.

Research interest

Spudcan foundations; cone penetration test; large deformation finite element methods; foundations of offshore wind turbines

Research Projects：

2019 - 2021：Chief Investigator, Study on spudcan-footprint interaction and its design approach, Young Scientists Fund, National Natural Science Foundation of China (NSFC).

2018 - 2020：Chief Investigator, Effect of installation and scouring on the bearing capacity of spudcan foundations under combined loading, Shandong Natural Science Foundation of China.

2017－2019：Chief Investigator, Young Talent Program, Ocean University of China.

2019 - 2022：Primary Participant, Stability of spudcan footings for jack-up rigs, NSFC-Shandong Joint Key Program, National Natural Science Foundation of China (NSFC).

2018－2021：Primary Participant, Full ocean depth site investigation system, National Key Technologies Research and Development of China, Ministry of Science and Technology of China.

Teaching：

Undergraduate：Engineering Mechanics

Postgraduate：Advanced Geotechnical Laboratory Test Methods

Offshore Geotechnical Engineering

Publication List

Journal paper

[1] Hossain, M.S., **Zheng, J.**, Menzies, D., Meyer, L. & Randolph, M.F. (2014). Spudcan penetration analysis for case histories in clay. **Journal of Geotechnical and Geoenvironmental Engineering, ASCE**, 140(7): 04014034.

[2] **Zheng, J.**, Hossain, M.S. & Wang, D. (2015). Numerical modeling of spudcan deep penetration in three-layer clays. **International Journal of Geomechanics**, 15(6): 04014089.

[3] **Zheng, J.**, Hossain, M.S. & Wang, D. (2015). New design approach for spudcan penetration in nonuniform clay with an interbedded stiff layer. **Journal of Geotechnical and Geoenvironmental Engineering, ASCE**, 141(4): 04015003.

[4] Wang, D., Bienen, B., Nazem, M., Tian, Y., **Zheng, J.**, Pucker, T. & Randolph, M.F. (2015). Large deformation finite element analyses in geotechnical engineering. **Computers and Geotechnics**, 65: 104-114.

[5] Hossain, M.S., **Zheng, J.**, Huston, A. (2015). Effect of spudcan geometry on penetration and extraction resistance in clay. **Géotechnique**, 65(2): 147-154

[6] **Zheng, J.**, Hossain, M.S. & Wang, D. (2016). Prediction of spudcan penetration resistance profile in stiff-over-

soft clays. **Canadian Geotechnical Journal**, 53(12): 1978-1990.

[7] **Zheng, J.**, Hossain, M.S. & Wang, D. (2017). Numerical investigation of spudcan penetration in multi-layer deposits with an interbedded sand layer. **Géotechnique**, 67(12): 1050-1066.

[8] **Zheng, J.**, Hossain, M.S. & Wang, D. (2018). Estimating spudcan penetration resistance in stiff-soft-stiff clay. **Journal of Geotechnical and Geoenvironmental Engineering, ASCE**, 144(3): 04018001.

[9] Wang, Z.L., Yao, J., Tian, N., **Zheng, J.** & Gao, P. (2018). Mechanical behavior and damage evolution for granite subjected to cyclic loading. **Advances in Materials Science and Engineering**, 4312494.

Conference paper

[1] **Zheng, J.**, Hossain, M. S. & Wang, D. (2012). 3D large deformation FE analysis of circular footing and spudcan on clay using CEL approach. Proc., 2nd International Symposium on Constitutive Modelling of Geomaterials, Beijing, 803-810.

[2] **Zheng, J.**, Hossain, M.S. & Wang, D. (2013). 3D large deformation FE analysis of spudcan and cone penetration on three-layer clays. Proc., 23rd International Offshore and Polar Engineering Conference, Anchorage, Alaska.

[3] **Zheng, J.**, Hossain, M.S. & Wang, D. (2014). Large deformation finite element analysis of cone penetration on strain softening, rate dependent non-homogeneous clay. Proc., 3rd International Symposium on Cone Penetration Testing, Las Vegas, USA..

[4] **Zheng, J.**, Hossain, M.S. & Wang, D. (2014). CPT based direct design approach for spudcan penetration in non-uniform clay with an interbedded stiff layer. Proc., 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics, Kyoto, 895-900.

[5] Hossain, M.S., **Zheng, J.**, Safinus, S., Kim, Y., Won, J. H., Park, J-S. & Jun, M. J. (2015). Installation of spudcan foundation in layered clays: centrifuge test and numerical analysis. Proc., 23rd International Offshore and Polar Engineering Conference, Hawaii, USA.

[6] **Zheng, J.** & Wang, D. (2018). Numerical analysis of spudcan-footprint interaction using Coupled Eulerian-Lagrangian approach. Proc., China-Europe Conference on Geotechnical Engineering, Vienna, 458-462.