

## 目 次

基于CPTU的土分类方法在港珠澳大桥中的应用	刘松玉, 邹海峰, 蔡国军, 祝刘文, 杜宇	(1)
工程桩对基坑稳定性的影响及其计算方法	郑刚, 张涛, 程雪松	(5)
软黏土中水平受荷桩的静力和循环 $p-y$ 曲线	黄茂松, 马昊, 李森, 俞剑, 张陈蓉	(9)
海积软黏土的强度特性与桩土界面剪切速率效应	孔令伟, 熊春发, 郭爱国, 杨爱武	(13)
南海软土微观结构与力学特性试验研究	蒋明镜, 李志远, 黄贺鹏, 刘俊	(17)
软土地基刚性桩复合地基沉降计算的简化方法	杨光华, 徐传堡, 李志云, 姜燕, 张玉成	(21)
UH模型在路堤软基变形分析中的应用	冯兴, 姚仰平, 李汝宁, 霍海峰	(25)
深基坑降水沉降计算土体弹性参数取值方法探讨	梁发云, 贾亚杰, 邓航, 姚笑青	(29)
柔性荷载刚性桩复合地基修正密度法稳定分析改进	刘吉福, 郑刚, 龚晓南, 谢永利, 陈昌富	(33)
考虑桩体破坏模式差异的路堤下刚性桩复合地基稳定分析方法研究	俞建霖, 李俊圆, 王传伟, 张甲林, 龚晓南, 陈昌富, 宋二祥	(37)
基坑隆起稳定性数值分析中的若干问题	王成华, 李亚杰	(41)
膜袋砂围堰荷载下软土地基破坏分区特性研究	周小文, 王晓亮, 汪明元, 王力	(45)
下挖增层桩顶约束对基桩屈曲稳定临界荷载影响分析	单华峰, 夏唐代, 俞峰, 胡军华	(49)
基于3D建模的海底管道在位稳定分析	熊春宝, 李志, 孙轩, 翟京生	(53)
管状EKG电化学注浆软基加固室内试验研究	沈扬, 邱晨辰, 宋顺翔, 苑笑曦, 施文	(57)
基于监测数据反演的软土高填方地基性能分析	叶观宝, 饶烽瑞, 张振, 鲁旺达, 苏泽昊, 许诗蕾	(62)
特大型溶洞回填体基桩荷载-沉降规律与计算研究	蒋武军, 鄢定媛, 王明明, 李煜, 陈骅伟, 蒋冲, 陈兆	(67)
双向激振循环荷载和振动频率共同作用下饱和软黏土孔压试验研究	黄珏皓, 陈健, 柯文汇, 钟宇, 邱岳峰	(71)
考虑参数空间变异性的隧道下穿建筑物安全性评价	程红战, 陈健, 胡之锋, 李建斌	(75)
上海地区软黏土的OCR及地质成因	高彦斌, 陈忠清	(79)
桩承式变刚度加筋垫层复合地基数值模拟	曹文昭, 郑俊杰, 严勇	(83)
软土地基平板载荷试验稳定标准的研究	秦振华	(87)
微型桩在软土地基加固工程中的应用	孙训海, 佟建兴, 杨新辉, 罗鹏飞, 杜世伟	(91)
地震作用下临近边坡的条形基础极限承载力研究	尹鑫, 周海祚, 郑刚	(95)
循环动载下软黏土路基变形响应的离心试验模拟	钱建固, 王其伟	(99)
改性聚酯注浆新技术在控制基坑周边房屋沉降的运用	苏志鹏, 梁永辉	(103)
聚丙烯酰胺改性石灰固化吹填土固结特性研究	雷华阳, 许英刚, 李鑫, 刘广学, 金亚伟	(107)
不同施工条件下基坑预降水对地连墙侧移影响研究	曾超峰, 胡义, 薛秀丽	(112)
天津港超软土地基加固特性探讨	尹长权	(116)
含气泡土的孔隙流体压缩系数计算分析	刘侃, 朱小军, 张帆舸, 杨敏	(120)
真空预压法处理软土地基的工程应用	曹杰, 郑建国, 刘智, 李波, 李攀, 杨超, 何丹, 赵海圆	(124)
基于智能优化算法的深大基坑施工反分析	左自波, 黄玉林, 吴小建	(128)
某地铁区间盾构法施工隧道事故实例与分析	郑刚, 崔涛, 程雪松, 孙基斌, 葛隆博	(132)
活性氧化镁碳化搅拌桩模型试验研究	刘松玉, 蔡光华, 杜广印, 王亮	(136)
基于CPTU的三亚新机场海洋软土工程特性评价	彭鹏, 蔡国军, 刘松玉, 祝刘文, 赵健, 夏涵	(140)
絮凝加速吹填土沉积的试验研究	郑爱荣, 朱洪满	(145)
真空预压联合戗灰拌合法加固新吹填超软土地基技术	刘爱民	(149)
砂土地基中V-H-M组合荷载下单桩分析方法研究	木林隆, 康兴宇, 李婉	(153)
基础托换对基坑周边建筑物变形控制作用的三维有限元分析	李靖, 徐中华, 王卫东	(157)
锚杆静压桩在低净空条件下既有建筑地基加固中的应用	吴江斌, 王向军, 宋青君	(162)
与上部建筑结合的地下变电站转换结构分析与设计	苏银君, 姜波, 翁其平	(166)
黄河冲积平原PHC管桩双桩水平承载性能现场试验研究	亓乐, 宋修广, 张宏博, 周志东, 岳红亚	(171)
软土地区深基坑对临近地铁结构影响的实测与分析	张立明, 朱敢平, 郑习羽, 杨振丹	(175)
基于可变组合机构的黏土基坑抗隆起稳定性上限分析	唐震, 黄茂松, 袁聚云	(180)
不同频率影响下结构性软黏土动力特性试验研究	杨爱武, 王亚成	(184)
新型无膜真空预压法加固超软吹填土模型试验及数值模拟分析	雷华阳, 刘英男, 冯双喜, 刘景锦	(189)
有机质相压缩变形对泥炭土固结特性影响	方坤斌, 李卫超, 杨敏	(194)
有明黏土固结特性的应变率效应和应变率取值研究	加瑞, 雷华阳	(198)
盾构隧道弯螺栓接头力学特性受预紧力影响的数值研究	张稳军, 张云旆, 宋晓龙	(203)
超深开挖对坑底桩的抗压承载力及沉降特性的影响因素研究	刁钰, 李光帅, 郑刚	(207)
利用带弯曲元应力路径三轴仪量测静止土压力系数研究	刘麟, 顾晓强, 黄茂松	(212)
CFG桩软基加固质量缺陷原因分析及处理方法探讨	李三明, 阎波, 安海堂, 程宗亮, 徐伟	(216)
软土区地铁不同类型轨道振动测试分析	丁智, 王永安, 顾晓卫, 黄小斌, 魏新江, 魏纲	(220)
浅基础框架建筑受邻近基坑开挖影响简化分析	张治国, 杨轩, 赵其华, 费思异, 贾廷臣	(224)
透水管桩技术研究进展	曾超峰, 薛秀丽, 梅国雄	(228)
Von-Mises半无限空间结构安定理论研究	庄妍, 王孟, 王康宇	(232)
基于CPTU测试的港珠澳大桥砂土液化评价方法研究	段伟, 蔡国军, 刘松玉, 祝刘文, 杜宇	(236)
大直径超长桩溜桩桩端阻力的计算方法	贾沼霖, 练继建, 陈昆, 杨爱武, 袁新勇, 王小合	(240)
堤(坝)基中浅层强透水层上覆砂层侵蚀试验与分析	王正成, 毛海涛, 王晓菊, 黄海均, 胡洪浩	(244)
双向叠层剪切箱的研制及模型土体振动台试验研究	曹文冉, 田伟, 李春	(249)

## CONTENTS

Application of CPTU-based soil classification methods in Hong Kong-Zhuhai-Macao Bridge .....	LIU Song-yu, ZOU Hai-feng, CAI Guo-jun, ZHU Liu-wen, DU Yu(1)
Effect of foundation piles on excavation stability and its calculation .....	ZHENG Gang, ZHANG Tao, CHENG Xue-song (5)
Static and cyclic $p$ - $y$ curves for laterally loaded piles in soft clay ...	HUANG Mao-song, MA Hao, LI Sen, YU Jian, ZHANG Chen-rong (9)
Effects of shear rate on strength properties and pile-soil interface of marine soft clay .....	KONG Ling-wei, XIONG Chun-fa, GUO Ai-guo, YANG Ai-wu(13)
Experimental study on microstructure and mechanical properties of seabed soft soil from South China Sea .....	JIANG Ming-jing, LI Zhi-yuan, HUANG He-peng, LIU Jun (17)
Simplified method for settlement calculation of rigid pile composite foundation in soft soils .....	YANG Guang-hua, XU Chuan-bao, LI Zhi-yun, JIANG Yan, ZHANG Yu-cheng(21)
Application of UH model to analysis of deformation of embankment on soft soils .....	FENG Xing, YAO Yang-ping, LI Ru-ning, HUO Hai-feng (25)
Discussions on elastic parameters of soil for land subsidence caused by decompression of confined aquifer in deep excavation .....	LIANG Fa-yun, JIA Ya-jie, DENG Hang, YAO Xiao-qing (29)
Improvement of revised density method for stability analysis of rigid-pile composite foundation under flexible loads .....	LIU Ji-fu, ZHENG Gang, GONG Xiao-nan, XIE Yong-li, CHEN Chang-fu(33)
Stability of composite foundation improved by rigid piles under embankment considering different failure modes of piles .....	YU Jian-lin, LI Jun-yuan, WANG Chuan-wei, ZHANG Jia-lin, GONG Xiao-nan, CHEN Chang-fu, SONG Er-xiang (37)
Some problems in numerical analyses of basal upheaval stability of foundation pits .....	WANG Cheng-hua, LI Ya-jie(41)
Characteristics of failure zones of soft soil foundation under flexible load of sandbag cofferdam .....	ZHOU Xiao-wen, WANG Xiao-liang, WANG Ming-yuan, WANG li(45)
Critical buckling capacity of piles with different pile-head constraints for excavation beneath existing foundation .....	SHAN Hua-feng, XIA Tang-dai, YU Feng, HU Jun-hua (49)
Stability analysis of submarine pipelines based on 3D model reconstruction .....	XIONG Chun-bao, LI Zhi, SUN Xuan, ZHAI Jing-sheng (53)
Experimental study on electro-osmosis chemical grouting reinforcement of marine soft clay using tubular EKG .....	SHEN Yang, QIU Chen-chen, SONG Shun-xiang, RUI Xiao-xi, SHI Wen (57)
Back analysis of performance of high fill embankment on soft soils based on field data .....	YE Guan-bao, RAO Feng-rui, ZHANG Zhen, LU Wang-da, SU Ze-hao, XU Shi-lei (62)
Load-settlement rules and calculation of foundation piles in karst cave .....	JIANG Wu-jun, YAN Ding-yuan, WANG Ming-ming, LI Yu, CHENG Hua-wei, JIANG Chong, CHENG Zhao (67)
Coupling effects of bidirectional cyclic loading and loading frequency on pore water pressure of saturated soft clay .....	HUANG Jue-hao, CHEN Jian, KE Wen-hui, ZHONG Yu, QIU Yue-feng (71)
Evaluation of safety of buildings above tunnels accounting for spatial variability of soil properties .....	CHENG Hong-zhan, CHEN Jian, HU Zhi-feng, LI Jian-bin (75)
OCR of Shanghai soft clay and its geological causes .....	GAO Yan-bin, CHEN Zhong-qing (79)
Numerical simulation of composite foundation using pile-supported and geosynthetics-reinforced cushion with variable stiffness .....	CAO Wen-zhao, ZHENG Jun-jie, YAN Yong (83)
Stability standards of plate load tests on soft foundation .....	QIN Zhen-hua (87)
Application of micro-piles in reinforcement of soft soil area ...	SUN Xun-hai, TONG Jian-xing, YANG Xin-hui, LUO Peng-fei, DU Shi-wei (91)
Seismic bearing capacity of strip footings adjacent to slopes .....	YIN Xin, ZHOU Hai-zuo, ZHENG Gang(95)
Centrifuge tests on behaviors of soft clay subgrade under cyclic loading .....	QIAN Jian-gu, WANG Qi-wei(99)
Application of PU grouting in settlements of structures induced by excavation .....	SU Zhi-peng, LIANG Yong-hui (103)
Experimental study on consolidation characteristics of polyacrylamide-modified lime-stabilized dredger fill .....	LEI Hua-yang, XU Ying-gang, LI Xin, LIU Guang-xue, JIN Ya-wei (107)
Wall deflection induced by pre-excavation dewatering under different construction conditions .....	ZENG Chao-feng, HU Yi, XUE Xiu-li (112)
Reinforcement characteristics of ultra-soft ground in Tianjin Port .....	YIN Chang-quan(116)
Calculation of coefficient of compressibility for air-water mixture in gassy soils .....	LIU Kan, ZHU Xiao-jun, ZHANG Fan-ge, YANG Min (120)

Application of vacuum preloading method in consolidating soft soil foundation .....	CAO Jie, ZHENG Jian-guo, LIU Zhi, LI Bo, LI Pan, YANG Chao, HE Dan, ZHAO Hai-yuan (124)
Back analysis of construction of large deep excavations using intelligent optimization algorithm .....	ZUO Zi-bo, HUANG Yu-lin, WU Xiao-jian (128)
Introduction and analysis of an accident in a shield tunnel ... ZHENG Gang, CUI Tao, CHENG Xue-song, SUN Ji-bin, GE Long-bo(132)	
Model tests on carbonated reactive MgO mixing piles ..... LIU Song-yu, CAI Guang-hua, DU Guang-yin, WANG Liang (136)	
Evaluation of soft soil engineering characteristics of Sanya New Airport from CPTU data .....	PENG Peng, CAI Guo-jun, LIU Song-yu, ZHU Liu-wen, ZHAO Jian, XIA Han (140)
Experimental study on flocculation-accelerated deposition of dredger fill ..... ZHENG Ai-rong, ZHU Hong-man (145)	
Reinforcement technology for vacuum preloading combined with lime mixing method for soft soil foundation ..... LIU Ai-min (149)	
Analytical method for single pile under V-H-M combined loads in sand ..... MU Lin-long, KANG Xing-yu, LI Wan (153)	
Three-dimensional finite element analysis of effects of foundation underpinning on deformation control of existing buildings adjacent to a deep excavation .....	LI Jing, XU Zhong-hua, WANG Wei-dong (157)
Application of foundation reinforcement by anchor-jacked piles under low clearance .....	WU Jiang-bin, WANG Xiang-jun, SONG Qing-jun n (162)
Analysis and design of conversion structure of an underground substation combined with superstructure .....	SU Yin-jun, JIANG Bo,WENG Qi-ping (166)
Field tests on bearing behavior of double pipe piles under horizontal load in Yellow River alluvial plain .....	QI Le, SONG Xiu-guang, ZHANG Hong-bo, ZHOU Zhi-dong, YUE Hong-ya(171)
Monitoring and analysis of influence of excavations on adjacent metro structures in soft soils .....	ZHANG Li-ming, ZHU Gan-ping, ZHENG Xi-yu, YANG Zhen-dan(175)
Upper bound analysis of basal stability of excavations in clay based on variable combined mechanism .....	TANG Zhen, HUANG Mao-song, YUAN Ju-yun (180)
Experimental study on dynamic characteristics of structural soft clay under different vibration frequencies .....	YANG Ai-wu, WANG Ya-cheng (184)
Model tests and numerical simulations of newly sheet-free vacuum preloading method for ultra-soft dredger fills .....	LEI Hua-yang, LIU Ying-nan, FENG Shuang-xi, LIU Jing-jin (189)
Effect of compression of organic matter on consolidation behavior of peaty soil ..... FANG Kun-bin, LI Wei-chao, YANG Min (194)	
Effect of strain rate on consolidation behavior of Ariake clay and selection of the suitable strain rate ..... JIA Rui, LEI Hua-yang (198)	
Numerical study on mechanical behavior of bent bolted connection in shield tunnel under effect of preload .....	ZHANG Wen-jun, ZHANG Yun-pei, SONG Xiao-long (203)
Influencing factors of deep excavation on bearing capacity and settlement of piles beneath excavation .....	DIAO Yu, LI Guang-shuai, ZHENG Gang (207)
$K_0$ -determination by stress path triaxial apparatus with bender element ..... LIU Lin, GU Xiao-qiang, HUANG Mao-song (212)	
Causes and processing methods for quality defects of soft foundation reinforcement using CFG piles .....	LI San-ming, YAN Bo, AN Hai-tang, CHENG Zong-liang, XU Wei (216)
Vibration of different types of tracks of subway in soft soil .....	DING Zhi, WANG Yong-an, GU Xiao-wei, HUANG Xiao-bin, WEI Xin-jiang, WEI Gang(220)
Simplified analysis of frame buildings with shallow foundation induced by excavation of adjacent foundation pit .....	ZHANG Zhi-guo, YANG Xuan, ZHAO Qi-hua, FEI Si-yi, JIA Yan-chen (224)
A review of recent advances in permeable pipe pile ..... ZENG Chao-feng, XUE Xiu-li, MEI Guo-xiong (228)	
The study of shakedown analysis for Von-Mises half-space ..... ZHUANG Yan, WANG Meng, WANG Kang-yu (232)	
Evaluation method for sand liquefaction of Hong Kong-Zhuhai-Macao Bridge based on CPTU tests .....	DUAN Wei, CAI Guo-jun, LIU Song-yu, ZHU Liu-wen, DU Yu (236)
Computational method for end resistance of large-diameter ultra-long piles during pile sliding .....	JIA Zhao-lin, LIAN Ji-jian, CHEN Kun, YANG Ai-wu, YUAN Xin-yong, WANG Xiao-he (240)
Laboratory tests on erosion of overlying sand layer on shallow and strong permeable stratum in dike (dam) foundation .....	WANG Zheng-cheng, MAO Hai-tao, WANG Xiao-ju, HUANG Hai-jun, HU Hong-hao (244)
Development of 2-D laminar shear box and shaking table tests on model soil .....	CAO Wen-ran, TIAN Wei, LI Chun(249)