

Southeast Symposium of Recent Developments in Geotechnics

 $7^{th} - 10^{th}$ July 2018

Southeast University, Nanjing, P.R. China

Organised and sponsored by:

School of Civil Engineering, Southeast University 东南大学土木工程学院 Institute of Future Underground Space, Southeast University 东南大学未来地下空间研究院 Jiangsu Society for Geotechnical Mechanics and Engineering 江苏省岩土力学与工程学会

Welcome:

We cordially invite you to the **2018 Southeast Symposium of Recent Developments in Geotechnics**, which will be held on $7^{\text{th}} - 10^{\text{th}}$ July 2018 at Southeast University, Nanjing, Jiangsu, P.R.China. This is the second in the series, which was launched in 2017 and attracted over 80 researchers from USA, Norway, UK, France, Austria, Japan, Australia, Singapore, India, HKSAR, and the top universities in P.R. China.

It aims at providing a supportive platform to exchange the latest progress in fundamental and applied geotechnical research, to explore new scientific frontiers and new ideas, and to develop strategic plan to tackle real world challenges in energy, environment and sustainability. We welcome contributions from all areas of geo-mechanics and geotechnical engineering. Each speaker will have sufficient to present their work in one of the following sessions: "Geotechnical Frontiers", "Multi-scale and Multi-physics" and "Cross-disciplinary geo-engineering", to promote focused discussions and scholarly debates. We also hope to bridge the gap between fundamental research and geotechnical applications by bringing researchers and practitioners in one room.

The symposium is part of the initiatives of Southeast University to raise research profile at the national and international level. A number of travel grants is available for international travellers. The event also supports our international recruitment of competent academic staff to strengthen existing capacities as well as to catalyse new developments. Potential applicants are highly encouraged to join the event.

This event will be organised in conjunction with the National Postgraduate Summer School in Civil Engineering $(1^{st} - 7^{th} July)$, which has been successfully organised and hosted by Southeast University in the past 8 years. The summer school accommodated around 300 students (selected over 1000 applicants) last year, and 60 of them were in the class of geotechnical engineering. Opportunities to interact with summer school students will be available.

Look forward to welcoming you in Nanjing.

Prof. Xia Li

Professor in Geotechnical Engineering School of Civil Engineering, Southeast University **On behalf of symposium organisers**

International advisory committee:

Prof. Yu-Jun Cui, Ecole des Pants ParisTech, France
Prof. Yannis Dafalias, UC Davis, USA
Prof. Andrew Dawson, University of Nottingham, UK
Prof. Yun-Tian Feng, Swansea University, UK
Prof. Jie Han, Kansas University, USA
Prof. Pierre-Yves Hicher, Ecole Centrale de Nantes, France
Prof. Amir M Kaynia, Norwegian Geotechnical Institute, Norway
Prof. Xiang-Song Li, Hong Kong University of Science and Technology, HKSAR, China
Prof. Francois Nicot, IRSTEA Grenoble, France
Prof. Mark Randolph, University of Western Australia, Australia
Prof. Kenichi Soga, UC Berkeley, USA
Prof. Wei Wu, University of Natural Resources and Life Sciences, Austria
Prof. Jian Zhao, Monash University, Australia

Symposium organisers:

Yong-Feng Deng, Professor, Southeast University Yan-Jun Du, Professor, Southeast University Lei He, Professor, Southeast University Xia Li (Chair), Professor, Southeast University Long-Gang Tian, Lecturer, Southeast University Fei Wang, Associate Professor, Southeast University Xue-Liang Zhao, Associate Professor, Southeast University

Secretary General:

Xia Li, Professor, Southeast University

Event Venue:

Jiulonghu Campus, Southeast University, Nanjing, P.R. China



Contact us:

For any inquiries or information, please email to <u>geo@pub.seu.edu.cn</u>.

Instruction to local transportation:

The symposium will mainly take place at the Zhiyou Room, Jiulonghu Hotel at the northwest corner of the Jiulonghu Campus, Southeast University. However, please note that the welcome and opening sesson on 8th July is scheduled at Round Auditorium (圆形报告厅) on the eastern side of the campus, as seen in the following maps.

Accommodation for oversea participants has been booked at the Jiulonghu (九龙湖) Hotel inside the Jiulonghu Campus, Southeast University; for domestic attendees, reservations have been made at the Golden Eagle Summit Hotel (金鹰尚美酒店), Jiangning District, Nanjing, China (http://nanjinggoldeneagle.31td.com).

Buses are arranged to bring our delegates from the hotels to the event avenue. Please find detailed and time schedule at the registration desk. In particular, there will be buses arranged after the photo-taking session on 8th July to take you from the Round Auditorium to Jiulonghu Hotel. Please don't miss it.



To Jiulonghu Hotel at Southeast University (东南大学九龙湖宾馆):

From Nanjing Train Station (南京站):

- Take the metro line No 3 (地铁三号线) towards Mozhoudonglu (秣周东路) station, and get off at Southeast University, Jiulonghu Campus (东大九龙湖) station
- Or by taxi: around 37min, RMB 76

From Nanjingnan Train Station(南京南站):

- Take the metro line No 3 (地铁三号线) towards Mozhoudonglu(秣周东路) station, and get off at Southeast University, Jiulonghu Campus(东大九龙湖) station
- Or by taxi: around 26min and RMB 35

From Nanjing Lukou Airport(南京禄口机场):

- Take the metro line S1 (地铁 S1 线) towards Jiyin Avenue(吉印大道) station, then walk to Jiyin Avenue North Bus Station(吉印大道北站), and take the 711 bus to arrive at the west entrance of Jiulonghu campus(Chukoujiagongqu bus station 出口加工区公交站)
- Take the metro line S1 (地铁 S1 线)to Nanjingnan station (南京南站), then transfer tometro line No 3 (地 铁 3 号线) to Southeast University, Jiulonghu Campus (东大九龙湖) station
- Or by taxi: around 25min and RMB 71

From Golden Eagle Summit Hotel (金鹰尚美酒店):

- Take the metro line No 1 (地铁一号线) towards Nanjingnan station (南京南站), then change for Metro Line No 3 (地铁三号线) towards Mozhoudonglu (秣周东路) station, and get off at Southeast University, Jiulonghu Campus (东大九龙湖) station
- Or by taxi: around 16min, RMB 21

To Golden Eagle Summit Hotel (金鹰尚美酒店):

From Nanjing Train Station (南京站):

- Take the metro line No 1 (地铁一号线) towards Zhongguoyaokedaxue (中国药科大学) station, and get off at Baijiahu (百家湖) station
- Or by taxi: around 29min, RMB 52

From Nanjingnan Train Station (南京南站):

• By taxi: around 13min and RMB 21

From Nanjing Lukou Airport(南京禄口机场):

- Take the metro line S1 (地铁 S1 线) towards Nanjingnan Train Station(南京南站) station, then transfer the metro line No 1 (地铁一号线) to Baijiahu (百家湖) station
- Or by taxi: around 27min and RMB 84

From Jiulonghu Hotel (九龙湖宾馆):

• By taxi: around 13min, RMB 19

Technical Programme:

Location: Jiulonghu Campus, Southeast University (东南大学九龙湖校区)

6 th July 2018						
18:00-22:00						
	Location: Room 201, Teaching Block 2 (教二 201)					
	7 th July 2018					
14:00-20:00	Registration	•				
	Location: Jiulonghu hotel and Golden Eagle Summit Hotel					
		8 th July 2018				
9:00-9:30	Welcome and opening					
9:30-9:50	Photo-taking	Photo-taking				
	Location: Round Audito	prium (圆形报告厅)				
9:50-10:10	Bus to Jiulonghu Hotel					
10:10-10:30						
	-	Prof. Guo-Liang Dai & Prof. Yan-Jun Du				
		, Jiulonghu Hotel (九龙湖宾馆至友厅)				
	technical Frontiers					
	ui & Jianfu Shao					
Organiser: Xia L						
	u Room, Jiulonghu Hotel ()					
10:20-10:38	Amir M. Kaynia (NGI)	Macro-element models for integrated SSI analyses in offshore wind turbines				
10:38-10:56	Weimin Ye (Tongji)	A new approach for determination of gas breakthrough in				
		saturated materials with low permeability				
10:56-11:14	Changfu Wei (CAS)	Pressures and potentials for soil: reconceptualization and				
		formulation				
11:14-11:32	Qi-Zhi Zhu (Hohai)	Bond-based nonlocal peridynamics theory with PD-FEM hybrid				
		implementation				
11:32-11:50	Tengyuan Zhao	Interpretation and simulation of soil properties from spatially				
	(CityU)	varying but sparsely measured data				
11:50-12:08	Hongwei Yang (HKU)	From calibration chamber studies to field conditions - Insights				
		from cavity expansion analysis of finite radial extent				
12:08-12:26	Guojun Cai (SEU)	Practice of full flow penetration testing in offshore engineering				
12:26-12:40	Discussion	Lak				
<u>(</u>		Lunch				
	s-disciplinary Geotechnics Du & Ningjun Jiang					
	-Jun Du & Ningjun Jiang					
-	u Room, Jiulonghu Hotel ()	九龙湖宾馆至友厅)				
13:40-13:58	Shijin Feng (Tongji)	Slope stability of landfills considering leachate recirculation				
_0.10 10.00		using vertical wells				
13:58-14:16	Chaosheng Tang	Effect of wetting-drying cycles on soil desiccation cracking				
-	(NJU)	behavior				
14:16-14:34	Ningjun Jiang (UHM)	Microbial induced calcite precipitation for internal erosion control				
14:34-14:52	Yangyang Li (NTU)	Effect of climate on tree stability				
14:52-15:10	Gangqiang Kong	Case study on bridge deck de-icing through energy piles				
	(Hohai)					
15:10-15:28	Yan-Jun Du (SEU)	Solidification/stabilization-based treatment of contaminated soils: lab-scale testing and field practice				
15:28-15:40	Discussion					
		Tea break				
Multi-scale and	Multiphysics Workshop					
Multi-scale and Multiphysics Workshop 1: Fundamentals						

Chair: Ali Daou	adji & Zhenyu Yin				
Organisers: Pier	rre-Yves Hicher & Xia Li				
Location: Zhiyo	u Room, Jiulonghu Hotel (九龙湖宾馆至友厅)			
16:00-16:18	Ali Daouadji (Lyon)	Instabilities in loose and dense granular materials			
16:18-16:36	Zhongxuan Yang (ZJU)	An anisotropic hypoplastic model for granular soils			
16:36-16:54	Jiangu Qian (Tongji)	Micromechanics-based constitutive modeling and DEM simulation of localized failure in geomaterials			
16:54-17:12	Zhenyu Yin (Nantes)	Unified mechanical modelling of sand-silt mixtures			
17:12-17:30	Kun Zhang (WSU)	Numerical analysis at the particulate scale of sand erosion under impinging jet			
17:30-17:48	Huan He (CityU)	Dynamics and micro-mechanics of soils			
17:48-18:00	Discussion				
		Symposium Banquet			
		9 th July 2018			
Multi-scale and	Multiphysics Workshop	II: Coarse granular materials			
	ves Hicher & Xia Li				
	rre-Yves Hicher & Xia Li				
-	u Room, Jiulonghu Hotel (九龙湖宾馆至友厅)			
8:30-8:48	Pierre-Yves Hicher	Modeling the effect of wetting on the mechanical behaviour			
0.50 0.40	(Nantes)	of crushable granular materials			
8:48-9:06	Sihong Liu (Hohai)	Field testing and microscopic interpretation on shear			
0.10 9.00		strengths of coarse granular materials			
9:06-9:24	Zhongzhi Fu (NHRI)	On the wetting-induced deformation of rockfill materials			
9:24-9:42	Hua-Bei Liu (HUST)	Particle crushing of calcareous sand and its relationship with			
		input energy			
9:42-10:00	Chunshun Zhang	Grain crushing in geotechnical engineering: a continuum			
	(Monash)	approach based on breakage mechanics			
10:00-10:10	-10:10 Discussion				
		Tea break			
Multi-scale and	I Multiphysics Workshop	III: Clay and other fine granular materials			
Chair: Yonggui	Chen & Lingling Zeng				
Organiser: Yong					
Location: Zhiyo	u Room, Jiulonghu Hotel (
10:30-10:48	Yujun Cui	Hydromechanical behaviour of bentonite pellet/powder			
	(ParisTech)	mixture			
10:48-11:06	Guoping Zhang (UMA)	Cross-scale characterization of shales by big data & large volume-based nano-indentation			
11:06-11:24	Xianfeng Liu (SWJU)	Multi-scale characterization of hydro-mechanical behavior of compacted Maryland clay			
11:24-11:42	Guanlin Ye (SHJTU)	A unified constitutive model for unsaturated soil for monotonic and cyclic loading			
11:42-12:00	Qian Zhai (SEU)	The role of pore-size distribution function on the engineering properties of soil			
12:00-12:18	Fei Wang (SEU)	Initial Investigation into the effect of temperature on the solidified/stabilized contaminated soil			
12:18-12:30	Discussion				
		Lunch			
	I Multiphysics Workshop Iu & Yong-Feng Deng	IV: Rock and cement-based granular materials			
Organiser: Yong					

Location: Zhiyo	u Room, Jiulonghu Hotel (九龙湖宾馆	至友厅)	
13:30-13:48	Jianfu Shao (Lilli)	Micro-macro modelling of plastic deformation and damage in clayey rocks		
13:48-14:06	Wanqing Shen (Lilli)	Effective strength of saturated double porous media with a Drucker-Prager solid phase		
14:06-14:24	Yi-Feng Chen(WHU)	Pattern formation and energy conversion for multiphase flow in geomaterials		
14:24-14:42	Ehsan Seyedi Hosseininia (Ferdowsi)	Analysis of reinforced soil walls using two-phase approach		
14:42-15:00	Wenni Deng (SEU)	Coral sand solidification by microbially induced carbonate precipitation		
15:00-15:10	Discussion			
		Теа	break	
Session 3: Offs	hore Geotechnics			
Chair: Dong Wa	ang & Xue-Liang Zhao			
-	min Gong & Xue-Liang Zha			
Location: Zhiyo	u Room, Jiulonghu Hotel (九龙湖宾馆	至友厅)	
15:30-15:45	Amir M. Kaynia (NGI)		troduction to NGI and their research in offshore eotechnics	
15:45-16:00	Dong Wang (OUC)	In	teraction between the spudcan and footprint	
16:00-16:15	Mingyuan Wang (Huadong)		非洋勘察及软基处理研究进展	
16:15-16:30	Xianhui You (Yongfu)	海	主风电嵌岩桩的思考	
16:30-16:45	Junbo Jia (Aker)		ntigue assessment of offshore jacket structures using onlinear time domain dynamic analysis	
16:45-17:00	Xue-Liang Zhao (SEU)		orizontal bearing capacity of offshore rock-socketed le foundation with large diameter	
17:00-17:20	Discussion	, · ·		
17:20-17:30	Closing ceremony			

Symposium delegates:

	Surname	First name	Affiliation	Country
1	Bulolo	Sam	Student, Nanyang Technological University	Singapore
2	Cai	Guojun	Professor, Southeast University	China
3	Chen	Yi-Feng	Professor, Wuhan University	China
4	Chen	Yonggui	Professor, Tongji University	China
5	Cheng	Zhanbo	PhD candidate, Warwick University	UK
6	Cui	Yujun	Professor, Ecole des Pants, Paris-Tech	France
7	Dai	Guo-Liang	Professor, Southeast University	China
0	Daouadji	Ali	Professor, Institut National des Science	France
8			Appliquees de Lyon	
9	Deng	Wenni	Lecturer, Southeast University	China
10	Deng	Yongfeng	Professor, Southeast University	China
11	Du	Yan-Jun	Professor, Southeast University	China
12	Feng	Shijin	Professor, Tongji University	China
13	Fu	Zhongzhi	Professor Senior Engineer, Nanjing Hydraulic	China
			Research Institute	
14	Geng	Xueyu	Assistant Professor, Warwick University	UK
15	Gong	Weimin	Professor, Southeast University	China

16	Не	Huan	Senior Research Assistant, City University of Hong Kong	HKSAR
17	Hicher Pierre-Yves		Professor, Ecole Centrale Nantes	France
18	Huang	Wengui	Geotechnical Engineer, Arup Singapore Pte Ltd	Singapore
19	Jia	Junbo	PhD, Aker solution	Norway
20	Jiang	Ningjun	Assistant Professor, University of Hawaii at Manoa	USA
21	Kang	Xin	Professor, Hunan university	China
22	Kong	Gangqiang	Professor, Hohai University	China
23	Lei	Zou	PhD, Nanyang Technological University	Singapore
24	Li	Во	PhD candidate, University of Cambridge	UK
25	Li	Gang	PhD, Jinan Rail Transit Group Co., Ltd.	China
26	Li	Xia	Professor, Southeast University	China
27	Li	Yangyang	PhD candidate, Nanyang Technological University	Singapore
28	Liu	Во	Guangdong electric power design institute Co., LTD.	China
29	Liu	Hua-Bei	Professor, Huazhong University of Science and Technology	China
30	Liu	Sihong	Professor, Hohai University	China
31	Liu	Songyu	Professor, Southeast University	China
32	Liu	Xianfeng	Professor, Southwest Jiaotong University	China
33	Liu	Zhibin	Associate Professor, Southeast University	China
34	Kaynia	M. Amir	Professor, Norwegian University of Science and Technology	Norway
35	Qian	Jiangu	Professor, Tongji University	China
36	Saleh Asheghabadi	Mohsen	Assistant professor, Dolat Abad University	Iran
37	Seyedi Hosseininia	Ehsan	Assistant professor, Ferdowsi University of Mashhad (FUM)	Iran
38	Shao	Jianfu	Professor, University of Lille	France
39	Shen	Wanqing	Assistant professor, University of Lille	France
40	Shen	Zhifu	PhD, Nanjing Tech University	China
41	Sounthararajah	Arooran	PhD candidate, Monash University	Australia
42	Tang	Chaosheng	Professor, Nanjing University	China
43	Tian	Longgang	Lecturer, Southeast University	China
44	Tong	Liyuan	Professor, Southeast University	China
45	Wang	Dong	Professor, Ocean University of China	China
46	Wang	Fei	Associate Professor, Southeast University	China
47	Wang	Mingyuan	Professor Senior Engineer, Huadong Engineering Corporation Limited	China
48	Wang	Rui	Lecturer, Tsinghua University	China
49	Wei	Changfu	Professor, Institute of Geotechnical Engineering, CAS	China
50	Wei	Kai	Associate Professor, Southwest Jiaotong University	China
51	Wu	Каі	Lecturer, Southeast University	China
52	Wu	Yongxin	Associate Professor, Hohai University	China
53	Yang	Hongwei	Post-doc, The University of Hong Kong	HKSAR
	Yang	Wei	Associate Professor, Hunan university	1113/11
54			, associate i rolessor, nanan aniversity	
54 55	Yang	Zhongxuan	Professor, Zhejiang University	China

57	Ye	Weimin	Professor, Tongji University	China
58	Yin	Zhenyu	Zhenyu Associate Professor, Ecole Centrale Nantes	
59	You	Xianhui	PhD, FujianYongfu Power Engineering Co., Ltd.	China
60	Zhai	Qian	Associate Professor, Southeast University	China
61	Zhang	Chunshun	Lecturer, Monash University	Australia
62	Zhang	Dongmei	Professor, Tongji University	China
63	Zhang	Guoping	Professor, University of Massachusetts Amherst	USA
64	Zhang	Guozhu	Associate Professor, Southeast University	China
65	Zhang	Kun	Assitant Professor, Washington State University	USA
66	Zhang	Ning	Associate Professor, Hohai University	China
67	Zhang	Qi	Lecturer, Southeast University	China
68	Zhao	Tengyuan	Postdoctoral Researcher, City University of Hong Kong	HKSAR
69	Zhao	Xue-Liang	Associate Professor, Southeast University	China
70	Zhu	Qi-Zhi	Professor, Hohai University	China
71	Zhuang	Yan	Professor, Southeast University	China

Welcome to Nanjing!