

3rd JSCE- CCES JOINT SYMPOSIUM OF CIVIL ENGINEERING

(OCTOBER 20-21, 2021, Tokyo, Japan)

Program



Hosted By Hosted by Japan Society of Civil Engineers, and
Chinese Civil Engineering Society



Preface

The 3rd JSCE-CCES Symposium is held online on October 20-21 2021, in Tokyo, Japan. It focuses on hydraulic engineering and coastal engineering in relation to sustainable development of infrastructure, and experts in those areas come together for exchange views and opinions, sharing their research findings and issues. We hope that this symposium will provide a platform and support them to network to build future collaboration and cooperation.

The 1st and 2nd JSCE-CCES joint symposiums was held in Tokyo, 2016 and Shanghai, 2018 respectively. The themes of these two symposiums were intelligent bridge and tunnel engineering; under the themes, participants discussed planning, design, innovative projects, operation, maintenance and renewal, new materials.

Hosts

Host Organizations

- (1) JAPAN SOCIETY OF CIVIL ENGINEERS (JSCE)
- (2) CHINA CIVIL ENGINEERING SOCIETY (CCES)

Cooperating Organizations

- (1) JSCE
 - Coastal Engineering Committee
 - Committee on Hydrosience and Hydraulic Engineering
- (2) CCES
 - Tongji University
 - Hohai University

COMMITTEE

(1) Chairman

Hitoshi Tanaka: Professor of Tohoku University, Director of Center of International Affair, JSCE

Xianglin Gu: Vice chairman of CCES, professor and vice president of Tongji University

(2) Organizing Committee

	First Name	Last Name	Affiliation	Note
Japan Side	Shichiro	Yano	Kyushu University	Chair
	Feng	Zhang	Nagoya Institute of Technology	Advisor
	Toshikazu	Kitano	Nagoya Institute of Technology	Secretary
	Makoto	Umeda	Nihon University	Secretary
	Yasunori	Watanabe	Hokkaido University	Secretary
	Ji	Dang	Saitama University	Secretary
China Side	Da	Chen	Hohai University	Chair
	Xiongyao	Xie	Tongji University	Advisor
	Ning	Zhuang	Hohai University	Secretary
	Biao	Zhou	Tongji University	Secretary
	Yingdi	Liao	Hohai University	Secretary
	Chen	Xue	Tongji University	Secretary
	Lijun	Hou	Hohai University	Secretary
	Bo	Da	Hohai University	Secretary

TOPICS

1. Disaster risk reduction in/around rivers and coastal areas
2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
3. River and coastal sedimentary processes and their control measures
4. Design and investigation of river, coastal and harbor structures
5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)
6. Global problem due to the climate change
7. Remote sensing/Laboratory and field measurement techniques
8. Coastal zone management and planning
9. Coastal fishery problems and resource management
10. Miscellaneous water-related problems

DATE and VENUE (online)**Online: October 20-22, 2021 (ZOOM)****Program-AT-A-Glance**

	CST	JST	Room1 (Main Venue)	Room2
Oct 20	8:00	9:00	Opening Ceremony	
	8:15	9:15	Keynote 1	
	8:55	9:55	Keynote 2	
	9:35	10:35	Coffee Break	
	9:45	10:45	Session 1	Session 2
	11:15	12:15	Lunch Time	
	12:15	13:15		Session 3
	13:45	14:45	coffee break	
	13:55	14:55	Session 4	Session 5
	15:10	16:10	Coffee Break	
	15:20	16:20	Special Session	
	17:00	18:00	-	
Oct 21	8:00	9:00	Keynote 3	
	8:40	9:40	Keynote 4	
	9:20	10:20	Coffee Break	
	9:30	10:30	Session 6	Session 7
	11:00	12:00	Closing Ceremony	
	11:10	12:10	-	

Room	Chair	Sessio Name	No.	CST	JST	Speaker Name	Affiliation	Title of paper	Key words	Topics
Day One (October 20th, 2021)										
Opening Ceremony (Room1)	Hitoshi Tanaka			8:00-8:15	9:00-9:15	Tamon Ueda	Hokkaido University, Shenzhen University, JSCE	Opening Address JSCE side		
						Xianglin Gu	Tongji University, CCSE	Openning Address CCSE side		
						Hitoshi Tanaka	Tohoku University, JSCE	JSCE IAC and Conference Anouncement		
Keynote (Room1)	Yasuto Tachikawa	Hydro Engineering Keynote	1	8:15-8:55	9:15-9:55	Shinjiro Kanae	Tokyo Institute of Technology	Toward next-generation global/regional terrestrial water cycle and water resources modelling under climate change	global hydrological modeling, climate change	6. Global problem due to the climate change
			2	8:55-9:35	9:55-10:35	Feng Jin	Tsinghua University	Recent advances on rock-filled concrete dams	dam, rock-filled	4. Design and investigation of river, coastal and harbor structures
				9:35-9:45	10:35-10:45	Coffee Break				
session 1 (Room1)	Shinichiro Yano	Hydro Engineering 1 (River)	1	9:45-10:00	10:45-11:00	Norio Tanaka	Saitama University	Backwater rise and current around patchy type vegetation after trapping debris at a flood event	additional resistance, overflow from levee, debris trapping type	1. Disaster risk reduction in/around rivers and coastal areas
			2	10:00-10:15	11:00-11:15	Duoyin Wang	Chongqing Jiaotong University	Study on Damage and Energy Dissipation Mechanism of Steel-concrete Composite Interface of High Piled Wharf in Inland River	High piled wharf of inland river, rock-embedded pile, composite structure, interface damage, energy dissipation	4. Design and investigation of river, coastal and harbor structures
			3	10:15-10:30	11:15-11:30	Michio Sanjou	Kyoto University	Development of portable USV automatically measures flow velocities in turbulent rivers	field velocity measurement, river, autonomous control	7. Remote sensing/Laboratory and field measurement techniques
			4	10:30-10:45	11:30-11:45	Min Gao	Yangtze Estuary Waterway Administration Bureau	New progress on the research of waterway regulation in the yangtze estuary	The Yangtze Estuary, Deep-draft Waterway, Research, Progress	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			5	10:45-11:00	11:45-12:00	Yasuo Nihei	Tokyo University of Science	Microplastic pollution in the Japanese rivers	microplastics, macroplatics, pollution, river	5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)
session 2 (Room2)	Yasunori Watanabe	Coastal Engineering 1(Modelling)	1	9:45-10:00	10:45-11:00	Keiko Udo	Tohoku University	Development of economic evaluation framework for adaptation to future beach loss	beach loss, sea level rise, storm surge, cost benefit analysis	8. Coastal zone management and planning
			2	10:00-10:15	11:00-11:15	Zaijin You	Dalian Maritime University	Long-term field measurements of erosive beach profiles on the coast of shandong, china		
			3	10:15-10:30	11:15-11:30	Yoshimitsu Tajima	The University of Tokyo	Challenges for modeling of morphology change of coral gravel beach	coral beach, swash zone, surf zone, morphology change, bedload transport	3. River and coastal sedimentary processes and their control measures
			4	10:30-10:45	11:30-11:45	Haijiang Liu	Zhejiang University	Frictional swash hydrodynamics under the improved seaward boundary condition	Swash hydrodynamics; Seaward boundary condition; Bottom friction; Method of characteristics ; Flow acceleration	2. River and coastal hydrodynamics (turbulence, currents, waves, tides,
			5	10:45-11:00	11:45-12:00	Yusuke Uchiyama	Kobe University	Marine environmental assessments in Japan based on a multi-nested 3-D circulation model	coastal ocean, Lagrangian/Eulerian transports, downsaling ocean model, ROMS, nesting, eddies	5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)
			6	11:00-11:15	12:00-12:15	Chunning Ji	Tianjin University	Numerical simulation of fluid-structure interaction between flexible vegetation and open channel flow	flexible vegetation, fluid-solid interaction, large eddy simulation, immersed boundary method, vector form intrinsic finite-element method	5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)

Room	Chair	Sessio Name	No.	CST	JST	Speaker Name	Affiliation	Title of paper	Key words	Topics
				11:15-12:15	12:15-13:15	Lunch				
session 3 (Room2)	Yuxiang Ma	Coastal Engineering 2 (Coastal Environment, etc.)	1	12:15-12:30	13:15-13:30	Dezhi Ning	Dalian University of Technology	Hydrodynamic investigation on the bragg-resonance performance induced by periodic submerged bars	Bragg Resonance, Hydrodynamic Performance, Numerical Simulation, Wave Nonlinearity	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			2	12:30-12:45	13:30-13:45	Nobuhito Mori	Kyoto University	Impact assessment of climate change on coastal hazards in East Asia	climate change, coastal hazards, typhoon	6. Global problem due to the climate change
			3	12:45-13:00	13:45-14:00	Xiaojing Niu	Tsinghua University	Probabilistic tsunami hazard assessment for southern coastal areas of China	Tsunami, Hazard assesment, Probability model, large-scale computing	
			4	13:00-13:15	14:00-14:15	Eiji Harada	Kyoto University	Computational study of ripple formation process in oscillating boundary layer	ripple, distinct element method (DEM), moving-particle semi-implicit (MPS) method, pore water	3. River and coastal sedimentary processes and their control measures
			5	13:15-13:30	14:15-14:30	Jun Zhang	CCCC-FHDI Engineering Co., Ltd	Introduction of Layout Consideration, Water Exchange and Beaches Evolution in Port City Project in Colombo, Sri Lanka	Port City, low-crest breakwater, water exchange, shoreline evolution, sediment	2. River and coastal hydrodynamics
			6	13:30-13:45	14:30-14:45	Koji Kawasaki	Hydro Technology Institute, Co., Ltd.	Flow filed simulation with solid-liquid-gas interaction	flow field simulation, solid-liquid-gas interaction numerical model	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
				13:45-13:55	14:45-14:55	Coffee Break				

Room	Chair	Sessio Name	No.	CST	JST	Speaker Name	Affiliation	Title of paper	Key words	Topics
session 4 (Room1)	Makoto Umeda	Hydro Engineering 3 (Hydrology)	1	13:55-14:10	14:55-15:10	Tetsu Oishi	Kobe University	Practical Application of Weather Radar Informationin Japan	Weather Radar, Short term rainfall prediction, flood and inundation	1. Disaster risk reduction in/around rivers and coastal areas
			2	14:10-14:25	15:10-15:25	Mingjing Zhang	Tianjin Research Institute for Water Transport Engineering	Effects of climate change on runoff characteristics and water depth resources of typical navigable stretch of the middle and lower reaches of the Yangtze River	climate change; runoff characteristics; channel conditions; Liyushan reach; the middle reaches of the Yangtze River	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			3	14:25-14:40	15:25-15:40	Kenji Tanaka	Disaster Prevention Research Institute, Kyoto University	Long Term Projection of Water Resources Over Japan With Super-High Resolution Climate Model and Landuse Scenario	climate chnege effect on hydrological cycle	6. Global problem due to the climate change
			4	14:40-14:55	15:40-15:55	Liqin Zuo	Nanjing Hydraulic Research Institute	Effects of sediment discharge dispatch of the Three Gorges Reservoir during flood season	Sediment, Dlood season,	3. River and coastal sedimentary processes and their control measures
			5	14:55-15:10	15:55-16:10	Yasuyuki Maruya	Kyushu University	Climate change impact assessment on the dam control during an extre	climate change effect on dam control	
session 5 (Room2)	Toshikazu Kitano	Coastal Engineering 3 (Coastal Structure & etc.)	1	13:55-14:10	14:55-15:10	Taro Arikawa (co-author: Yasuo Kotake)	Chuo University	Theory and application of hydraulic model experiments - wave-seabed interaction-	Similarity parameter, Physical experiment, waves, foundation	4. Design and investigation of river, coastal and harbor structures
			2	14:10-14:25	15:10-15:25	Yuxiang Ma	Dalian University of Technology	Assessment of bearing capacity of a large diameter pile foundation under extreme breaking waves	Breaking wave, Monopile, Wave-pile-soil interaction, Bearing capacity	4. Design and investigation of river, coastal and harbor structures
			3	14:25-14:40	15:25-15:40	Susumu Araki	Osaka University	Hydraulic Performance of Rubble Mound Structure	Rubble Mound	4. Design and investigation of river, coastal and harbor structures
			4	14:40-14:55	15:40-15:55	Yunfei Guan	Nanjing Hydraulic Research Institute	Research and Application of Bucket Foundation Breakwater	Buck foundation breakwater,Earth pressure,Thick muddy soils,Experimental studies	4. Design and investigation of river, coastal and harbor structures
			5	14:55-15:10	15:55-16:10	Puyang Zhang	Tianjin University	Structure and installation of bucket foundation for offshore wind turbines in China	Offshore wind; Bucket foundation; structure design; Suction installation	4. Design and investigation of river, coastal and harbor structures
				15:10-15:20	16:10-16:20	Coffee Break				

Room	Chair	Sessio Name	No.	CST	JST	Speaker Name	Affiliation	Title of paper	Key words	Topics
special session (Room1)	Hitoshi Tanaka	Disaster Mitigation (Recent Flood Disaster in Japan, China, Europe and US)						Introduction		
			1	15:20-17:00	16:20-18:00	April J. Lander	ASCE New Zealand Group	Hurricane Ida extreme weather and flooding in the United States and disaster risk mitigation measures	Hurricane Ida, extreme weather, flooding in the United States, risk mitigation	1. Disaster risk reduction in/around rivers and coastal areas
			2			Tomohito Yamada	Hokkaido University	Overview of the 2021 European floods and flood risk assessment associated with climate change	Flood in Germany (and Netherland?), 2021	1. Disaster risk reduction in/around rivers and coastal areas
			3			Fang Yang	Pearl River Water Resource Commission	Perspectives on preventing pluvial and fluvial flooding in densely urban area-Lessons from the Zhengzhou "July 20" historic rainfall	fluvial flooding, hazard, resilient infrastructure, urban area	1. Disaster risk reduction in/around rivers and coastal areas
			4			Zeping Xu	China Institute of Water Resources and hydropower Research	Challenges & measures of dam safety management upon climate change scenario	Climate change, Dam safety, Integrated management, Resilience	1. Disaster risk reduction in/around rivers and coastal areas
			5			Takahiro Sayama	Disaster Prevention Research Institute, Kyoto University	Development of a high-resolution nationwide distributed flood forecasting system in Japan	Flood forecasting, Realtime, RRI Model, Hydrology, Flood disaster	1. Disaster risk reduction in/around rivers and coastal areas
			6			Yasuto Tachikawa	Kyoto University	Advanced water hazard prediction technology against super-class typhoons	flood control in Japan	

Room	Chair	Sessio Name	No.	CST	JST	Speaker Name	Affiliation	Title of paper	Key words	Topics
Day Two (October 21st, 2021)										
Keynote (Room1)	Feng Zhang	Costal Engineering Keynote	3	8:00-8:40	9:00-9:40	Jinhai Zheng	Hohai University	Transverse oscillations in harbors with varied water depth	harbor resonance, transverse oscillations, analytical solution, Boussinesq wave model	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			4	8:40-9:20	9:40-10:20	Jun Sasaki	The University of Tokyo	Estuarine environmental processes and management from the past toward the future	water and sediment quality, hypoxia, fishery, environmental restoration, blue carbon	5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)
				9:20-9:30	10:20-10:30	Coffee Break				
session 6 (Room1)	Haijiang Liu	Hydro Engineering 4 (Enviroment)	1	9:45-10:00	10:45-11:00	Xiaoteng Shen	Hohai University	Aggregation of biofilm-covered suspended particulate matter in estuarines and coastal waters	microplastics,Aggregation,biofilm-covered suspended particulate matter,estuarines and coastal water	5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)
			2	10:00-10:15	11:00-11:15	Hitoshi Miyamoto	Shibaura Institute of Technology	Long-term trends in equilibrium water temperature under climate change in Japan	equilibrium water temperature, trend analysis, seasonality, Mann-Kendall Test, warming and cooling trends, Japan	5. River and coastal environmental problems (vegetation, mangrove and living breakwater, etc.)
			3	10:15-10:30	11:15-11:30	Yingdi Liao	Hohai University	Exploration of the Yangtze River Shoreline Protection and Utilization Evaluation		2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			4	10:30-10:45	11:30-11:45	Keisuke Nakayama	Kobe University	Internal waves and mass transport	soliton; breather; layer fluid; stratification; pycnocline	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
session 7 (Room2)	Chunning Ji	Coastal Engineering 4 (Coastal Engineering)	1	9:45-10:00	10:45-11:00	Jing Geng	Harbin Engineering University	Hydrodynamic analysis, design method and prospective applications of the multi-purpose coastal structures	Hydrodynamic analysis, design method and prospective applications of the multi-purpose coastal structures	4. Design and investigation of river, coastal and harbor structures
			2	9:30-9:45	10:30-10:45	Masaru Yamashiro	Kyushu University	Experimental Study on Effects of Wind on Wave Overtopping	Wave overtopping, Model experiment, Wind	7. Remote sensing/Laboratory and field measure
			3	10:15-10:30	11:15-11:30	Xiao Liu	Ocean University of China	Analysis of water wave overtopping above perforated caissons	perforated caisson; wave overtopping; mean overtopping discharge; numerical simulation;experimental test	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			4	10:00-10:15	11:00-11:15	Yasunori Watanabe	Hokkaido University, School of Engineering	Dynamics of breaking waves	breaking waves, vortices, turbulence, free surface	2. River and coastal hydrodynamics (turbulence, currents, waves, tides, tsunami etc.)
			5	10:45-11:00	11:45-12:00	Zhan Hu	Sun Yat-Sen University	Laboratory study on wave propagation through vegetation with following and opposing currents	Wave dissipation by vegetation, wave and currents flow, drag coefficient, analytical model	
			6	10:30-10:45	11:30-11:45	Toshikazu KITANO	Nagoya Institute of Technology	Revisited Return Period and Joint Occurrence of Sea Extremes	Return period, Dependence, Correlation, Storm surge	4. Design and investigation of river, coastal and harbor structures
Close Ceremony (Room1)	Da Chen	Close Ceremony		11:00-11:10	12:00-12:10	Da Chen	Hohai University	Closing Address CCES		

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