

# ACECC TC28 Seminar

## Application of Monitoring Technology for Infrastructures

Feb. 29, 2024 in Manila



# Agenda

No.	Time	Contents	Organization	Presenter
1	18:00 – 18:05	Opening	JSCE	Prof. Eiki YAMAGUCHI Kyushu Institute of Technology
2	18:05 – 18:12	Introduction of TC28, Overview of Monitoring Guideline	JSCE	Dr. Masaaki Nakano Nippon Koei Co., Ltd.
3	18:12 – 18:20	Recent Activities of TC28	JSCE	Mr. Tetsuro Goda Nippon Koei Co., Ltd.
4	18:20 – 18:35	Current State of Bridge Maintenance in Korea	KSCE	Prof. Chang Su Shim Chung-Ang University
5	18:35 – 18:50	Cable-stayed Bridge Tension Monitoring	JSCE	Mr. Takashi HARADA Oki Electric Industry Co., Ltd.
6	18:50 – 19:05	Ground Displacement Monitoring from the Metro Line Ben Thanh - Suoi Tien in Ho Chi Minh City	VFCEA	Prof. Le Thanh Binh Anglia Ruskin University
7	19:05 – 19:20	Phase-free Road Management with Monitoring Technology	JSCE	Dr. Hiroshi DOBASHI Shutoko Technology Center
8	19:20 – 19:25	Discussion and Summarization	ALL	Prof. Eiki Yamaguchi (Moderator)
9	19:25 – 19:30	Closing	JSCE	Prof. Eiki Yamaguchi



# 1. Opening



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## Chair of TC28 (also, Japanese Representative of ACECC)



**Name:**

**Prof. Eiki YAMAGUCHI**

**Affiliation:**

**Department of Civil Engineering,  
Kyushu Institute of Technology**

# Introduction of TC28



# TC Members

Organization	(1) Name	(2) Affiliation	(3) Position
ASCE (US)	Dr. Lian Duan	California Department of Transportation, USA	Senior Bridge Engineering, Steel Committee Chair
	Dr. Chungwook Sim	University of Nebraska at Lincoln	Assistant Professor
CICHE (Taiwan)	Dr. Tzu-Kang Lin	University of Yanming-Chiaotung, Taiwan	Professor
EA (Australia)	Dr. Shane Scriven	Engineers Australia's Asset Management Council	Maintenance & Reliability Special Interest Group Chair
IEB (Bangladesh)	Dr. A.F.M.Saiful Amin	Bangladesh University of Engineering and Technology (BUET)	Professor
IEP (Pakistan)	Dr. Shamsun Fareed	NED University of Engineering & Technology, Karachi-Pakistan	Associate Professor
	Mr. Wajahat Nassar	Remco Center	General Manager incl. Inventories/Warehousing
KSCE (Korea)	Dr. Chang-Su Shim	School of Civil and Environmental Engineering, Urban Design and Studies, Chung-Ang University	Professor
	Dr. Robin Eunju Kim	Department of Civil & Environmental Engineering Hanyang University	Assistant Professor
PICE (Philippine)	Dr. Benito M. PACHECO	University of the Philippines Diliman	Professor
VFCEA (Vietnam)	Dr. Pham Hoang Kien	Faculty of Engineering Department of Automation and Design of Roads, University of Transport and Communication	Associate Professor
	Dr. Le Thanh Binh	Anglia Ruskin University, UK (Ho Chi Minh city University of Transport, Vietnam)	Senior Lecturer, UK (Visiting Lecturer, Vietnam)
JSCE (Japan)	Dr. Masaaki NAKANO	Research & Development Center, Nippon Koei Co., Ltd.	General Manager, Center for Advanced Research
	Mr. Tetsuro GODA	Research & Development Center, Nippon Koei Co., Ltd.	Engineer, Center for Advanced Research

# Japanese National Committee

Organization	(1) Name	(2) Affiliation
JSCE (Chair)	Dr. Eiki YAMAGUCHI	Department of Civil Engineering, Kyushu Institute of Technology
JSCE (Executive secretary)	Dr. Masaaki NAKANO	Nippon Koei Co., Ltd.
JSCE (Secretary)	Mr. Tetsuro GODA	Nippon Koei Co., Ltd.
JSCE	Kimitoshi MATSUYAMA	Nippon Koei Co., Ltd.
JSCE	Masaki MIYAMURA	FUKUYAMA CONSULTANTS Co., Ltd.
JSCE	Hiroshi DOBASHI	Shutoko Technology Center
JSCE	Manabu KASAHARA	East Nippon Expressway Company Limited
JSCE	Motoharu KAWANISHI	Oki Electric Industry Company, Limited
JSCE	Takashi HARADA	Oki Electric Industry Company, Limited



# Background of TC Establishment

- Infrastructure is critical for economic prosperity, economic growth and sustainable development. While many countries invest heavily in infrastructure construction, much less attention has been paid to maintenance work, which could generate a serious bottleneck to economic growth and public services in the long run.
- Utilizing new technologies for systematic infrastructure management is essential for both preventing accident and minimizing life-cycle-cost.



**Air-borne salt from sea**



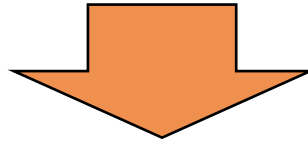
**Deteriorated beam**



# Objectives

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- Civil Infrastructures have been constructed across the Asian region; however, maintenance has already become a big issue.
- Although a lot of monitoring technologies and products are developed, the administrators are struggling to choose technologies since the practical specifications are not standardized.



- The TC is to prepare the guidelines on the scheme for the maintenance of infrastructure; by making good use of monitoring technology, the maintenance work would be made sophisticated and efficient.

# JSCE Recommendations (Draft)

- [Draft of Recommendations for Utilization of Monitoring Technology in Japan](JSCE) was published in June, 2022
- The TC will share the contents and discuss developing and reconstructing as the ACECC guidelines.



## Table of Contents of JSCE Recommendations

Chapter 1	General provisions
Chapter 2	Monitoring of Concrete Slabs
Chapter 3	Monitoring of Concrete Girders
Chapter 4	Monitoring of Steel Girders
Chapter 5	Monitoring in Salt-damaged Environments
Chapter 6	Monitoring of Bridge Piers and Foundations
Chapter 7	Monitoring of Glide Surfaces and Slopes
Chapter 8	Collection of Monitoring Data
Chapter 9	Data Storage and Utilization