

**Proceedings of the 22<sup>nd</sup> Taiwan-Japan-Korea Joint Seminar on  
Earthquake Engineering for Building Structures  
(SEEBUS-2021)**

**[Draft]**

**Suwon, Korea**

**October 15, 2021**

Organized by School of Civil, Architectural Engineering and Landscape  
Architecture, Sungkyunkwan University

Coordinators

Prof. Tzu Kang Lin (National Chiao-Tung University, Taiwan)

Prof. Atsushi Sato (Nagoya Institute of Technology, Japan)

Prof. Jung-Yoon Lee (Sungkyunkwan University, Korea)

## Seminar Program

9:00- 9:15	Opening Session Coordinators: Prof. Tzu Kang Lin (National Chiao-Tung University, Taiwan) Prof. Atsushi Sato (Nagoya Institute of Technology, Japan) Prof. Jung-Yoon Lee (Sungkyunkwan University, Korea)	
9:15- 10:15	Session J1	Evaluation of Structural Performance of Unbonded Post-tensioned Precast Concrete Walls Presenter: Meika CHO (Tokyo Institute of Technology)
		Cyclic Loading Tests on Reinforced Concrete Columns Strengthened with UFC Panels Presenter: Sua LIM (Kyoto University)
		Mathematical Modeling of Steel Beam-Column under Compressive Axial Force with One End Monotonic Moment Presenter: Soya NAKATSUKA (Nagoya Institution of Technology)
		Buckling Strength and Buckling Behavior of I-Shaped Beams with Continuous Lateral Restraints on Upper Flange Presenter: Hiroto KAGESAWA (Tokyo Institute of Technology)
		Buckling Strength Evaluation Method of Plate on Elastic Foundation and Its Application to Sandwich Panels Presenter: Hinako MITSUHIRO (Tokyo Institute of Technology)
10:15- 11:15	Session T1	Seismic Retrofitting of Masonry-Infilled RC Frames Using UHPC Shotcrete Presenter: Tuong-Dat-Dinh DO (National Cheng Kung University)
		Seismic Shear Behavior of High-Strength Reinforced Concrete Column-Eccentric Steel Beam Joints Presenter: Yu-Chen OU (National Taiwan University)
		Loading Tests for RC Frames Retrofitted by Attaching Steel Members Presenter: Yi-Hsuan TU (National Cheng Kung University)
		Preliminary Seismic Assessment for Low-Rise RC Building Structures Including Corrosion-Induced Deterioration Presenter: Chien-Kuo CHIU (National Taiwan University of Science and Technology)
		In-Plane Cyclic Behavior of Shear-Critical Steel-Plate Composite Walls with Axial Loading Presenter: Yin-Nan HUANG (National Taiwan University)
11:15- 11:30	Group Photo and Coffee Break	

11:30-12:30	Session K1	Nonlinear Modeling Parameters of Reinforced Concrete Coupling Beams Presenter: Tae-Sung EOM (Dankook University)
		Seismic Performance and Strategic Design Method of Precast Intermediate Shear Wall Presenter: Decukhang (DK) LEE (Chungbuk National University)
		Evaluation of Torsional Strength of Reinforced Concrete Beams Subjected to Bending, Shear and Torsion Presenter: Dong-Hwan KIM (Kongju National University)
		Plastic Hinge Model of Beam-Column Joints Presenter: Hyeon-Jong HWANG (Konkuk University)
		Flexural and Shear Strengths of Composite Walls with Boundary Elements of Steel U-Section Presenter: Hyeon-Jin KIM (Seoul National University)
12:30-13:30	Lunch	
13:30-14:45	Session J2	Flexural Response Simulation of Cast-in-Place Concrete-Filled Steel Tube Piles Presenter: Naresh SUBEDI (Tokyo Institute of Technology)
		Distortional Buckling of Cold-Formed Channel Member under Compression Presenter: Kazuya MITSUI (Tokyo Institute of Technology)
		Experimental Study of the Beam-Column with Different Width-to-Thickness Ratio Presenter: Takuro HAYASHI (Nagoya Institute of Technology)
		Theoretical Analysis of Elastic Local Buckling for H-Shaped Beams Subjected to End Moments and Uniformly Distributed Load Presenter: Tomoki NAKANO (Tokyo Institute of Technology)
		Base Isolation and Mid-story Concentrated Vibration Control System Presenter: Takehito KUMANO (Kyushu branch, Takenaka Corporation)
		Analytical Investigation into Seismic Performance of Induction-Heated Curved Brace Presenter: Yuan LIU (Kyoto University)
14:45-15:45	Session T2	Finite Element Analysis of Hollow Square Steel Brace with Infill Reinforcement under Cyclic Loading Presenter: Chui-Hsin CHEN (National Yang Ming Chiao Tung University)

		<p>Seismic Behavior of Low-Yield Steel and Concrete Composite Shear Walls Subjected to Earthquake-Type Loading Presenter: Chin-Tung CHENG (National Kaohsiung University of Science and Technology)</p>
		<p>Prediction of Smooth Hysteretic Model Parameters Using Support Vector Regression Presenter: Tzu-Kang LIN (National Chiao-Tung University)</p>
		<p>Experimental Development of Cored Moment Resisting Stub-Column Dampers Presenter: Po-Chien HSIAO (National Taiwan University)</p>
15:45-16:00	Coffee Break	
16:00-17:00	Session K2	<p>Head-Restraining Reinforcement in Knee Joints Subject to Reversed Cyclic Loading Presenter: Thomas H.-K. KANG (Seoul National University)</p>
		<p>Shake Table Testing of Braced and Friction-Added Suspended Ceiling Systems Presenter: Su-Chan JUN (Seoul National University)</p>
		<p>Structural Identification of Strength Degrading Hysteresis Using Nondimensionalized Bouc-Wen Model Presenter: Sung-Yong KIM (Changwon National University)</p>
		<p>Seismic Design of Non-Structural Elements in Negative Pressure Wards Presenter: Yurim CHU (TI Structural Engineers)</p>
17:00-18:00	<p>Closing Session Coordinators: Prof. Tzu Kang Lin (National Chiao-Tung University, Taiwan) Prof. Atsushi Sato (Nagoya Institute of Technology, Japan) Prof. Jung-Yoon Lee (Sungkyunkwan University, Korea)</p>	

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**Prof. Atsushi Sato (Nagoya Institute of Technology, Japan)**

**Prof. Jung-Yoon Lee (Sungkyunkwan University, Korea)**

## 9:15-10:15 (Session J1: Japan side presentation)

**(Chairs: Prof. Susumu Kono (Tokyo Institute of Technology),**

**Prof. Taku Obara (Tokyo Institute of Technology))**

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2. Seismic Shear Behavior of High-Strength Reinforced Concrete Column-Eccentric Steel Beam Joints

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**Prof. Jinwon Shin (Catholic Kwandong University))**

1. Nonlinear Modeling Parameters of Reinforced Concrete Coupling Beams  
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3. Evaluation of Torsional Strength of Reinforced Concrete Beams Subjected to Bending, Shear and Torsion  
Dong-Hwan Kim, Hyeong-Gook Kim, Yong-Jun Lee, Chan-Yu Jung, and Kil-Hee Kim
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**(Chairs: Prof. Masanori Tani (Kyoto University),**

**Prof. Atsushi Sato (Nagoya Institute of Technology))**

1. Flexural Response Simulation of Cast-in-Place Concrete-Filled Steel Tube Piles  
Naresh SUBEDI, Taku OBAMA, Susumu KONO, Osamu, KANEKO,  
Tetsuo HAYAKAWA, Hidekazu WATANABE, Tomohisa MUKAI

2. Distortional Buckling of Cold-Formed Channel Member under Compression  
Kazuya MITSUI, Kikuo IKARASHI, Tomoki KOBASHI, Ryohei KUWADA
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Chui-Hsin CHEN, Yu-Ting CHEN
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Chin-Tung CHENG, Sheng-Xian HWANG, Chau-Cho YU



3. Prediction of Smooth Hysteretic Model Parameters Using Support Vector Regression  
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Kuo-Chun CHANG
  
4. Experimental Development of Cored Moment Resisting Stub-Column Dampers  
Po-Chien HSIAO, Kun-Sian LIN

**15:45-16:00 (Coffee Break)**

**16:00-17:00 Session K2: Korean side presentation)**

**(Chairs: Prof. Tae-Sung EOM (Dankook University),**

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1. Head-Restraining Reinforcement in Knee Joints Subject to Reversed Cyclic Loading  
Thomas H.-K. KANG
  
2. Shake Table Testing of Braced and Friction-Added Suspended Ceiling Systems  
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**Coordinators: Prof. Tzu Kang Lin (National Chiao-Tung University, Taiwan)**

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