### ► 2023/03/20 [Mon]

March 20-21, 2023

Time	Presentation Title	Speaker (* online)	
08:30 - 09:00	Registration		
Chair: Kuo-Fong Ma			
		Chung-Che Chou National Center for Research on Earthquake Engineering, NARLabs, Taiwan	
09:00 - 09:15	Opening	<b>Sun-Lin Chung</b> Institute of Earth Sciences, Academia Sinica, Taiwan	
		<b>Yue-Gau Chen</b> Center for Sustainability Science, Academia Sinica, Taiwan	
	Overview of RESIST Project Resilient societies through smart-city technology: Assessing earthquake risk in ultra-high resolution	<b>Kuo-Fong Ma</b> Institute of Earth Sciences, Academia Sinica, Taiwan E-DREaM, National Central Univeristy, Taiwan	
09:15 – 09:45	2 Smart Sensor Deployments in the Tokyo Area: New Means of Communicating Earthquake	<b>Naoshi Hirata</b> Earthquake Research Institute, The University of Tokyo, Japan	
	Risk and Chances for Seismology  3 Overview of UCLA Smart City Research Program	Yousef Bozorgnia* Department of Civil and Environmental Engineering, UCLA, USA	
Online 09:45 - 10:05	Long-term building safety assessment under a series of earthquake excitations	Chin-Hsiung Loh* Department of Civil Engineering, National Taiwan University, Taiwan	
10:05 – 10:25	Distributed Computing with Dense Seismic Arrays for Structural Health Monitoring	Monica Kohler  Department of Mechanical and Civil Engineering, California Institute of Technology, USA	
10:25 - 10:45	Break		
	Chair: Silvia Mazzoni		
10:45 – 11:05	Implementation of a structural health monitoring system in Japan	<b>Akihiro Kusaka</b> Kobori Research Complex Inc., Japan	
Online 11:05 – 11:25	The Pivotal Role of Low-Cost Instrumentation in Achieving a Resilient Civil Infrastructure — A Structural Engineer's Perspective	Farzad Naeim* Farzad Naeim, Inc., USA	
11:25 - 12:10	Discussion on the perspective of low-cost sensor building arrays for smart city	Kuo-Fong Ma Institute of Earth Sciences, Academia Sinica, Taiwan E-DREaM, National Central Univeristy, Taiwan Silvia Mazzoni* UCLA, USA	
12:10 - 13:30	Lunch		
12.10 10.00	2611011		















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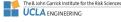
Time	Presentation Title	Speaker (* online)
Chair: Chung-Han Chan		
13:30 - 13:50	The application and development of the CWB earthquake early warning system	<b>Da-Yi Chen</b> Central Weather Bureau, Taiwan
13:50 - 14:10	Application of low-cost instrumentation for filling instrumentation gaps on ground surface and in structures	<b>Hamid Haddadi</b> California Geological Survey, USA
14:10 - 14:30	Progress on the earthquake early warning and shakemaps system using low cost sensors in Taiwan	<b>Yih-Min Wu</b> Department of Geosciences, National Taiwan University, Taiwan
14:30 – 14:50	Development of web and questionnaire system using small seismometer	<b>Hiroshi Tsuruoka</b> Earthquake Research Institute, The University of Tokyo, Japan
14:50 – 15:05	Smart QSIS Seismic Network (QSN) for in-situ Intensity notification and Structural Health Monitoring	<b>Utpal Kumar</b> UC Berkeley, USA Institute of Earth Sciences, Academia Sinica, Taiwan
15:05 – 15:20	Extracting Building Response from the Low- Cost QSIS Seismic Network (QSN) for Structure Integrity Monitoring	<b>Wen-Tzong Liang</b> Institute of Earth Sciences, Academia Sinica, Taiwan
15:20 - 15:40	Break	
	Chair: Hamid Haddadi	
15:40 - 15:55	Development of a smart building monitoring system using high performance-cost MEMS sensors	<b>George C. Yao</b> Department of Architecture, National Cheng Kung University, Taiwan
15:55 – 16:10	Using subspace identification and subspace tracking for online monitoring of modal parameters under seismic events	Shieh-Kung Huang Department of Civil Engineering, National Chung Hsing University, Taiwan
16:10 - 16:50	Discussion on National and Private network toward building resilient cities & infrastructures	Chung-Han Chan E-DREaM, National Central Univeristy, Taiwan Hamid Haddadi California Geological Survey, USA















> 2023/03/21 [TUE]

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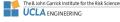
Chair: Naoshi Hirata  A structural health monitoring system with accelerometers based on the capacity spectrum method –examples with national heritage monuments to high-rise towers  From Bridge Damage due to the 2016 Meinong Earthquake and Rehabilitation Experience to Building a Seismic Array of Bridges  Prom Bridge Damage due to the 2016 Meinong Earthquake and Rehabilitation Experience to Building a Seismic Array of Bridges  Prom Bridge Damage due to the 2016 Meinong Earthquake and Rehabilitation Experience to Building a Seismic Array of Bridges  Prom Bridge Damage due to the 2016 Meinong Earthquake and Rehabilitation Experience to Building a Seismic Array of Bridges  Prom Bridge Damage due to the 2016 Meinong Earthquake Tandal Center for Research on Earthquake Engineering, Taiwan  Promise The use of cellular-enabled, MEMS-based sensors to assist public and private earthquake response efforts  Pevelopment and Experimental Verification of Machine Learning Damage Detection for Seismically-Excited Buildings  Department of Civil Engineering, National Taiwan University, Taiwan  Pachine Chan Department of Earth Sciences, National Taiwan Normal University, Taiwan  Chair: Kate Huihsuan Chen  Chair: Kate Huihsuan Chen  Minimal Sensing and Model-Data Fusion for Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term Monitored Residential Building based on Entropy Analysis  Implementation Aspects of Building Seismic  Shih-Yu Joseph Chu	Time	Presentation Title	Speaker (* online)
accelerometers based on the capacity spectrum method – examples with national heritage monuments to high-rise towers From Bridge Damage due to the 2016 Meinong Earthquake Research Institute, The University of Tokyo, Japan  Prom Bridge Damage due to the 2016 Meinong Earthquake and Rehabilitation Experience to Building a Seismic Array of Bridges  Prom Bridge Damage due to the 2016 Meinong Earthquake and Rehabilitation Experience to Building a Seismic Array of Bridges  Prom Bridge Damage due to the 2016 Meinong Earthquake Engineering, Taiwan  Prom Bridge Damage due to the 2016 Meinong Earthquake Engineering, Taiwan  Page Safehub, USA  Pevelopment and Experimental Verification of Machine Learning Damage Detection for Seismically-Excited Buildings  Popartment of Civil Engineering, National Taiwan University, Taiwan  Popartment of Earth Sciences, National Taiwan University, Taiwan  Promodification of Ambient vibration  Promodification of Buildings  Prom Bridge Damage Early Warning Technique for Structures without Installing Monitoring Systems  Prom Bridge Damage Early Warning Technique for Structures without Installing Monitoring Systems  Prom Bridge Damage Early Warning Technique for Structures without Installing Monitoring Dapartment of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Prom Rang-Yao Yeh National Center for Research on Earthquake Engineering, National Yang Ming Chiao Tung University, Taiwan  Prom Rang-Yao Yeh National Center for Research on Earthquake Engineering, National Yang Ming Chiao Tung University, Taiwan  Prom Rang-Yao Yeh National Center for Research on Earthquake Engineering, National Yang Ming Chiao Tung University, Taiwan  Prom Rang-Yao Yeh National Center for Research o		Chair: Naoshi Hirata	
Development and Experimental Verification of Machine Learning Damage Detection for Seismically-Excited Buildings   Dynamic characteristics of TAIPEI 101: from monitoring to prediction of ambient vibration	09:00 – 09:20	accelerometers based on the capacity spectrum method –examples with national heritage	Earthquake Research Institute, The University
sensors to assist public and private earthquake response efforts  Development and Experimental Verification of Machine Learning Damage Detection for Seismically-Excited Buildings  Dynamic characteristics of TAIPEI 101: from monitoring to prediction of ambient vibration  Dynamic Sensing and Model-Data Fusion for Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term Monitored Residential Building Seismic  Implementation Aspects of Building Seismic  Shih-Yu Joseph Chu  Chia-Ming Chang Department of Civil Engineering, National Taiwan Normal University, Taiwan  Yaochieh Chen Department of Earth Sciences, National Taiwan Normal University, Taiwan  Wilad Roohi* University of Nebraska-Lincoln, USA  Shu-Hsien Chao National Center for Research on Earthquake Engineering, Taiwan  Tzu-Kang Lin Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Shih-Yu Joseph Chu	09:20 - 09:35	Earthquake and Rehabilitation Experience to	National Center for Research on Earthquake
09:55 – 10:10 of Machine Learning Damage Detection for Seismically-Excited Buildings  10:10 – 10:25 Dynamic characteristics of TAIPEI 101: from monitoring to prediction of ambient vibration  10:25 – 10:50 Break  Chair: Kate Huihsuan Chen  Minimal Sensing and Model-Data Fusion for Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term Monitored Residential Building based on Entropy Analysis  Implementation Aspects of Building Seismic  Department of Civil Engineering, National Taiwan Department of Earth Sciences, National Taiwan University, Taiwan Department of Civil Engineering, National Taiwan Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Shih-Yu Joseph Chu		sensors to assist public and private earthquake	
10:10 – 10:25  Department of Earth Sciences, National Taiwan Normal University, Taiwan  10:25 – 10:50  Break  Chair: Kate Huihsuan Chen  Minimal Sensing and Model-Data Fusion for Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term  11:25 – 11:40  Sustainability Evaluation of a Long-term Entropy Analysis  Implementation Aspects of Building Seismic  Department of Earth Sciences, National Taiwan  Department of Earth Sciences, National Taiwan  Department of Earth Sciences, National Taiwan  Milad Roohi* University of Nebraska-Lincoln, USA  Shu-Hsien Chao National Center for Research on Earthquake Engineering, Taiwan  Tzu-Kang Lin Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Implementation Aspects of Building Seismic  Shih-Yu Joseph Chu	09:55 – 10:10	of Machine Learning Damage Detection for	Department of Civil Engineering, National
Chair: Kate Huihsuan Chen  Online 10:50 – 11:10  Minimal Sensing and Model-Data Fusion for Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term Monitored Residential Building based on Entropy Analysis  Implementation Aspects of Building Seismic  Milad Roohi* University of Nebraska-Lincoln, USA  Shu-Hsien Chao National Center for Research on Earthquake Engineering, Taiwan  Tzu-Kang Lin Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Implementation Aspects of Building Seismic  Shih-Yu Joseph Chu	10:10 - 10:25		Department of Earth Sciences, National Taiwan
Minimal Sensing and Model-Data Fusion for Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term Monitored Residential Building based on Entropy Analysis  Implementation Aspects of Building Seismic  Milad Roohi* University of Nebraska-Lincoln, USA  Shu-Hsien Chao National Center for Research on Earthquake Engineering, Taiwan  Tzu-Kang Lin Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Shih-Yu Joseph Chu	10:25 – 10:50	Break	
Performance-based Seismic Monitoring of Instrumented Buildings  Structural Damage Early Warning Technique for Structures without Installing Monitoring Systems  Sustainability Evaluation of a Long-term Monitored Residential Building based on Entropy Analysis  Implementation Aspects of Building Seismic  Milad Rooni* University of Nebraska-Lincoln, USA  Shu-Hsien Chao National Center for Research on Earthquake Engineering, Taiwan  Tzu-Kang Lin Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Shih-Yu Joseph Chu		Chair: Kate Huihsuan Che	en
11:10 – 11:25 for Structures without Installing Monitoring Systems  National Center for Research on Earthquake Engineering, Taiwan  Tzu-Kang Lin Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Implementation Aspects of Building Seismic  Shih-Yu Joseph Chu		Performance-based Seismic Monitoring of	
11:25 – 11:40 Monitored Residential Building based on Entropy Analysis Department of Civil Engineering, National Yang Ming Chiao Tung University, Taiwan  Implementation Aspects of Building Seismic Shih-Yu Joseph Chu	11:10 - 11:25	for Structures without Installing Monitoring	National Center for Research on Earthquake
	11:25 – 11:40	Monitored Residential Building based on	Department of Civil Engineering, National Yang
11:40 – 11:55 Array toward Intelligent Long-term Building Department of Civil Engineering, National Cheng Kung University, Taiwan	11:40 - 11:55	Array toward Intelligent Long-term Building	Department of Civil Engineering, National
11:55 – 13:30 Lunch	11:55 – 13:30	Lunch	















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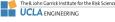
Time	Presentation Title	Speaker (* online)
Chair: Monica Kohler		
13:30 - 13:45	Development of the Taiwan Earthquake Risk Assessment System (TERA)	<b>Chin-Hsun Yeh</b> National Center for Research on Earthquake Engineering, Taiwan
Online	incurred and training programs based on past	<b>Keiko Tamura*</b> Niigata University, Japan
13:45 – 14:05		Munenari Inoguchi* University of Toyama, Japan
14:05 – 14:25	Survey research on changes in disaster prevention awareness and behavior of residents by their perception of indoor seismic intensity	<b>Takashi Furuya</b> Institute of Scientific Approaches for Fire & Disaster, Japan
14:25 – 15:05	Summary of Round-Table Workshop on Leveraging Low-Cost Seismic Networks In Building Resilient Cities & Infrastructures	Naoshi Hirata Earthquake Research Institute, The University of Tokyo, Japan
		Monica Kohler  Department of Mechanical and Civil Engineering, California Institute of Technology, USA
	End of the workshop	
15:30 - 16:30	Close door discussion for "How to move on and What for the next?"	TEC Meeting Room (7009)















**► POSTER** 

March 20-21, 2023

Number	Poster Title	Authors
PP01	Building array of the CWB, analysis to M > 6.5 earthquake in 1999-2016	Min-Cheng Huang Department of Earth Sciences, National Taiwan Normal University, Taiwan
PP02	Earthquake GMPEs and DYFI data relations from the Durres, 2019 Mw6.4, Albania, earthquake	<b>Edlira Xhafaj</b> Institute of Earth Sciences, Academia Sinica, Taiwan
PP03	Obtaining QSIS structural waveform data using the Web Service Platform	<b>Chung-Hung Lo</b> Institute of Earth Sciences, Academia Sinica, Taiwan
PP04	Building Footprint Recognition from Satellite Imagery with Convolutional Neural Networks and its applications to Taiwan	<b>Wei-An Chen</b> Department of Earth Sciences, National Central University, Taiwan
PP05	Real-Time Hybrid Testing of Full-Scale TMD with 3D Digital Twin Technique	Chan-Jung Kang Department of Civil Engineering, National Cheng Kung University, Taiwan
PP06	Identification of sliding behavior of isolators - Utilize full-scale base isolated platform	<b>Yi-Lin Hsu</b> Department of Civil Engineering, National Cheng Kung University, Taiwan
PP07	A Rapid Structure Damage Assessment Scheme Based on the Normalized- Relative- Displacement-Vibration-Shape	<b>Guan-Yu Cheng</b> Department of Civil Engineering, National Cheng Kung University, Taiwan













