

2018

The International Joint Workshop Structural Design of High-Rise Buildings with Passive Control Devices

Aula Barat, ITB Campus, 20-21 August 2018

Date 20-21 August 2018
Time 08:30 – 17:30
Place Aula Barat, Institut Teknologi Bandung,
Jl. Ganesha 10, Bandung

Fee
General IDR 500,000 for one day
IDR 850,000 for two days
AARGI members IDR 400,000 for one day
IDR 500,000 for two days
Students FREE for limited seats.
Early registration is needed
by a deposit of IDR 50,000

Registration link bit.ly/HighRisePassiveControl

Day One



Activities of NCREE on Research and Applications of Passive Control Technology

Shyh-Jiann Hwang, Director General of NCREE and Professor at NTU



Recent Development of Seismic Metallic Dampers in Indonesia

Muslinang Moestopo, Associate Professor at ITB



From Seismic Isolation to Building Mass Damper

Kuo-Chun Chang, Professor at NTU



Design and Construction of High-Rise Buildings with Seismic Isolation System in Indonesia

Davy Sukamta, Chairman and Founder of Davy Sukamta & Partners



Taipei 101 - Structural Design and Application of Wind Damper

Shaw Shieh, Chairman of Evergreen Consulting Eng. Inc & Adjunct Professor at NTU



Structural Design and Maintenance of Hualien Tzu Chi Seismically Isolated Hospital

Paul Chen-Yang Ko, Chairman of Taiwan Eng. Consultants Group



Mid-Story Isolation Design for NTU Civil Engineering Research Building with Precast Technology

Tzu-Liang Wu, Vice President of Ruentex Eng. & Constr. Co., Ltd

Day Two



Design, Testing and Analysis of Buckling-Restrained Braced Frames

Keh-Chyuan Tsai, Professor at NTU



Seismic Design of Buildings with Viscous Dampers

Yin-Nan Huang, Associate Professor at NTU



Taiwan Seismic Design Code for Passive Control Systems

Shiang-Jung Wang, Associate Professor at NTUST



Viscoelastic Coupling Dampers (VCD) for Enhancing the Seismic Resilience of Jakarta Signature Tower

Sugeng Wijanto, Chairman and Founder of PT Gistama Indonesia



Structure Design and Application of the High-tech Facilities

Jeng-Wei Li, Principle of TEAM Constr. & Eng. Consulting Ltd



Viscous Damper Evaluation in High-Rise Building and Ideal Examples for Code Base Shear Reduction by Additional Viscous Damping

Stephen Huang, Vice President of Federal Eng. Consultant, Inc.



Energy Dissipation vs. Isolation Design of High-Rise Mansion Buildings in Taipei Basin

Hsien-Kai Liu, Vice General Manager of HML & New Structure Group



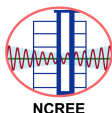
Sloped Rolling-Type Seismic Isolation Design For Critical Equipment in High-Tech Factories, Museums, and Emergency-Response Centers

Mu-Sen Tsai, Vice General Manager of Vio Creative Technology

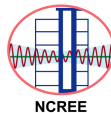
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Structural Engineering Research Group
Faculty of Civil and Environmental
Engineering



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Dr. Shyh-Jiann Hwang

Director General of NCREE and Professor at the
Department of Civil Engineering of NTU

Experiences

- Deputy Director, NCREE, NARL
- President, CTSEE
- President, CSSE
- Director, CEER, NTU
- Professor, NTUST

Dr. Shyh-Jiann Hwang is a Professor of Civil Engineering at the National Taiwan University, and also serves as the Director of the National Center for Research on Earthquake Engineering, Taipei, Taiwan. He received his PhD from the University of California at Berkeley. He has been the president of the Chinese Taiwan Society for Earthquake Engineering (CTSEE) from 2014 to 2018, and also the president of the Chinese Society of Structural Engineering (CSSE) from 2008 to 2012.

Dr. Shyh-Jiann Hwang is a member of Joint ACI-ASCE Committee 352, Joints and Connection in Monolithic Concrete Structures. His research interests include seismic design of reinforced concrete structure, shear behavior of reinforced concrete members, and seismic retrofitting of reinforced concrete structures. He is also a Principal Investigator for Taiwan seismic code for reinforced concrete structures, school building retrofitting program, pioneer research project for nuclear power plant, and hazard risk evaluation for the support structure of offshore wind farms.



Dr. Ir. Muslinang Moestopo

Associate Professor at Institut Teknologi Bandung (ITB)

Experiences

- Associate Professor at Institut Teknologi Bandung (ITB)

Dr. Muslinang Moestopo is a lecturer and researcher at civil engineering at Faculty of Civil and Environmental Engineering of Institut Teknologi Bandung (ITB). He received bachelor degree in civil engineering (1985) from ITB, then Master Degree (1989) and Ph.D degree (1994) from University of Wisconsin-Madison.

He specializes and has authored many papers in the area of seismic resistant steel structures.

Dr. Kuo-Chun Chang

Professor at NTU and Consultant at NCREE



Experiences

- President of CTSEE
- President of CSSE
- President of TCIAE
- Chairman of Civil Engineering Department of NTU
- Distinguished Professor at NTU

Prof. Kuo-Chun Chang is currently Distinguished Professor of the Department of Civil Engineering of National Taiwan University (NTU). Before joining the faculty of National Taiwan University in 1991, he worked as Research Assistant Professor and Associate Professor at the State University of New York at Buffalo and National Center for Earthquake Engineering Research at Buffalo for 6 years.

Dr. Chang served as the past Director of National Center for Research on Earthquake Engineering (NCREE) for 7 years, past department chair of civil engineering department of National Taiwan University for 6 years and the past presidents of the Chinese Structural Association and Chinese Taiwan Society of Earthquake Engineering.

Prof. Chang's research experiences relate to earthquake engineering and multiple hazards for buildings and bridges include seismic behavior and retrofit of conventional reinforced concrete structures, development of new seismic isolation and energy dissipation systems as well as structural health monitoring systems, and seismic behavior of precast segmental concrete bridge columns. In addition, he has been involved in the development of design codes and guidelines related to seismic design of buildings and bridges in Taiwan.



Experiences

- Principal of Davy Sukamta & Partners
- Past President of HAKI (1999-2011, 2014-2017)
- Member of advisory team of DKI Jakarta building construction (TABG)

Ir. Davy Sukamta

Principal of Davy Sukamta & Partners

Ir. Davy Sukamta has designed many tall buildings and deep basement structures in his 40 years career, among others the Plaza Indonesia Extension (48-story with 5-level basement) which applied Up-down construction method and saved 11 months of construction time, and Indonesia-1 Tower (303-meter high 63-story with 7-level basement), the first super-tall building fully designed by Indonesian engineers from conceptual design to working drawings and site supervision.

He has authored many papers, many of which were presented in international forums such as He has authored many papers, many of which were presented in international forums. His expertise is in seismic design of tall buildings including seismic protective system such as seismic isolation.



Experiences

- Structural Engineer, Brandow & Johnston Assoc., California
- Registered APEC/IPEA Structural Engineer

Mr. Shaw Shieh

Chairman of Evergreen Consulting Engineering, Inc. and Adjunct Professor at National Taiwan University

Mr. Shieh is a structural engineer focused on the consulting services of tall or challenging buildings. He is the principal-in-charge of the following projects :

1. Taipei 101
2. Taichung Metropolitan Opera House
3. Taipei Performing Arts Center (a structure on "Friction Pendulum System" isolators)
4. C1/D1 MRT Joint Development Project (a project consisting of a 56 story and a 76 story buildings with TMDs and Toggle Brace-Dampers)
5. Building 9 at Jinwan Plaza, a 70 story mixed-use building in Tianjin, China.
6. Farglory The One, a 68 story mixed-use building in Kaohsiung, Taiwan
7. A 61 story residential building in Kaohsiung, Taiwan
8. Fubon Xinyi A25 Commercial Building Complex, a 58 story mixed-use tower in Taipei, Taiwan



Experiences

- Design of high rise building
- Design of isolated building
- Design of highway bridge

Mr. Paul Chen Yang Ko

Chairman of TCEG, Professional Structural Engineer, and Professional Civil Engineer

Mr. Chen Yang Ko is a professional structural engineer and civil engineer, and Chairman of Taiwan Engineer Consultants Group (TECG). He has designed high rise buildings, isolated buildings and highway bridges for over forty years



Dr. Tzu-Liang Wu

Vice President of Ruentex Group and Structural Technician

Dr. Tzu-Liang Wu is currently the Vice President of the Precast Design Department of Ruentex Engineering & Construction Co.; he is also a registered structural technician and has an office in Ruentex Group. He has been engaging in structural design work since 1994. Also, he has partaken in the structural design of more than 50 buildings, including factories, office, high rise buildings, and school buildings.

Dr. Wu's main technical fields are related to structural design, precast concrete design, structural control design, and R&D in construction automation. His projects include the mid-story isolation design of the NTU Civil Engineering Research Building and the Runtex Wanxi residential building. He has also participated in many prefabrication design specifications in mainland china for many years.

Experiences

- Manager, Ruentex Architecture
- Assistant President, Ruentex Group
- Director, Taipei Structural Technicians Association



Dr. Keh-Chyuan Tsai

Professor of NTU and Consultant at NCEE

Prof. Keh-Chyuan Tsai received his B.S. degree in civil engineering from National Taiwan University (NTU) in 1977, and received his M.S. degree in structural engineering from Stanford in 1980. He then worked as a structural engineer in San Francisco office of SOM from 1980 to 1984, obtained his Ph.D. degree in structural engineering from Berkeley in 1988. He is a registered civil and structural engineer in Taiwan and California.

In 1989, he joined the faculty of the NTU and started his research focusing on seismic steel buildings. He was the Division Head (1995 to 2003) and Director (2003 to 2010) of NCEE. In these positions, he facilitated the development and growth of the center's research capacity, led the center's earthquake hazard mitigation research and outreach.

Notable achievements include leading the development of a general purpose nonlinear structural analysis program *PISA3D*. He developed various types of buckling restrained braces being used in more than one hundred buildings in Taiwan and New Zealand. He has also actively engaged in international collaborations and received the *ASCE Moisseiff Award* in 2017 and the *AISC Special Achievement Award* in 2018. He currently serves as an editor-in-chief for *J. of Earthquakes and Structures*.

Experiences

- Director, NCEE
- Structural Engineer Skidmore, Owings and Merrill



Experiences

- Assistant Professor, Nanyang Technological University, Singapore
- Board Member, Open Education Consortium

Dr. Yin-Nan Huang

Associate Professor of NTU, Courtesy Researcher of NCREE and Associate Director at the Center for Teaching and Learning Development of NTU

Dr. Huang currently works in the Department of Civil Engineering at National Taiwan University (NTU) as an associate professor. He also serves as an associate director in the Center of Teaching and Learning Development (CTLD) in NTU, in charge of orientation and professional development of new faculties in NTU.

Dr. Huang's research interests include the design of passive structural control systems, and seismic performance assessment of buildings and nuclear power plants. Other than his faculty position in NTU, he also serves as an associate researcher in National Center for Research on Earthquake Engineering in Taiwan. He has published 20+ academic journal papers and 60+ conference papers in the field of earthquake engineering. He received Outstanding Young Scholar Award from the Foundation for the Advancement of Outstanding Scholarship in 2011 through 2016 and the NTU excellent teaching award in 2013 and 2014.



Experiences

- Research Fellow, NCREE
- Secretary General, Director, Chairman, CTSEE
- Chairman, Board Member, CSSE

Dr. Shiang-Jung Wang

Associate Professor of NTUST, Courtesy Researcher of NCREE, and Joint Appointment Associate Professor of NCKU

Dr. Shiang-Jung Wang is currently as an associate professor of the National Taiwan University of Science and Technology (NTUST), a courtesy researcher of the National Center for Research on Earthquake Engineering (NCREE), and a Joint Appointment Associate Professor of the National Cheng Kung University (NCKU) in Taiwan. He has been the secretary general, director, chairman, and board member of the Chinese Taiwan Society for Earthquake Engineering (CTSEE) and the chairman and board member of the Chinese Society of Structural Engineering (CSSE), since 2014.

Dr. Wang's researches are related to structural control technology and large-scale testing for structures and equipment. He has published over 30 peer reviewed journal papers and more than 80 conference papers, in which most are international journals and conferences. He has also published many technical reports, books, and patents. His outstanding research accomplishments have been implemented into many domestic seismic design codes.



Sugeng Wijanto, Ph.D.

Principal Director of PT. Gistama Intisemesta

Experiences

- Principal Director of PT. Gistama Intisemesta
- Senior Lecturer, Trisakti University

Established his own structural engineering firm, PT Gistama Intisemesta - Jakarta, Indonesia, in October 1989 and at present holds the position of Principal Director. He has been handling a wide range of projects, from low-rise to mega-tall buildings. He has more than 33 years' experience practicing in Indonesia, South East Asia, Oman, India and Hawaii etc. These projects have enriched his experience and engineering professionalism, especially in earthquake engineering and structural dynamics, precast/prestressed concrete structures, assessment and strengthening of reinforced concrete and unreinforced masonry buildings.

Besides his engineering practice, He has also been closely affiliated with the Civil Engineering Department of Trisakti University in Jakarta since 1988. He is involved in teaching Structural Dynamics as well as Reinforced Concrete Design.

In 2009, he was also involved in the post-earthquake assessment of structures for some client companies in Padang, West Sumatra and worked closely with the EERI reconnaissance team from the USA. Currently, he is also appointed as an Editorial Board Member of the World Housing Encyclopaedia, Earthquake Engineering Research Institute (EERI) and International Association of Earthquake Engineering (IAEE) in USA. Member from several local and overseas structural associations.



Li, Jeng-Wei

Structural Engineer and

Principal of Team Engineering Consulting Ltd.

Experiences

- Principal, Team Engineering Consulting Ltd.
- Award of Young Engineer/ Chinese Institute of Engineers, 2006

Jeng-Wei Li is currently as principal of the Team Engineering Consulting Ltd. He has been in charge for structural design of many high-tech facilities in Taiwan for more than 15 years such as TSMC, AUO, MediaTek, Academia Sinica, ...etc. He began structural nonlinear dynamic analysis programming since 26 years ago and continue his structural dynamic analysis research and seismic damper design to the present time. His experience include structural experiment of large dimensional structure and computer simulation of the real structure. Through the real building dynamic response measurement on site, he has the chance to compare the real world and the computational virtual word structures. By considering the soil and structure dynamic interaction behavior, high-tech facilities in Tainan could reduce seismic acceleration response during the M6.2 earthquake on 2016/02/06. He also developed programs to covert ETABS structural analysis model into Tekla model with extremely details, such as rebar, bolts, stiffening plate, shear stud. He believe engineering could bring us to the better world.



Experiences

- Winner of Excellence Young Engineer from R.O.C. Structural Engineering Society in 2006
- Ove Arup & Partner (CA) / Jae-Lien Engineering Consultant (TWN)
- Federal Engineering Consultant, Associates.

Mr. Stephen Li-Tsung Huang

Vice President of Federal Engineering Consultant and Structural Engineer (S.E.) of R.O.C

Stephen Huang is skilled at structural analysis, tall buildings, seismic resistance and energy absorb device design. His projects cover both public and private buildings, including multi-use projects, office and commercial buildings, hotels, institutional, educational and health facilities, arenas, parking structures, and residential buildings. He is also Involved in different construction materials of RC, SRC, Steel, Wood and Precast buildings, participated developing in passive energy dissipation system, deep excavation and top-down construction.

Stephen are currently a registered Structural Engineering of both Taipei & Taiwan Structure Engineering Association (TESA) and the member of the Chinese Taiwan Society for Earthquake Engineering (CTSEE) and the Chinese Society of Structural Engineering (CSSE). He also performs as a peer reviewer committee of Taipei Structure Engineering Association (TESA).



Experiences

- Vice General Manager, NSG & HML ARCH.&BUILDING Research Institute (2017~ Present)
- Manager, NSG (2003~2017)

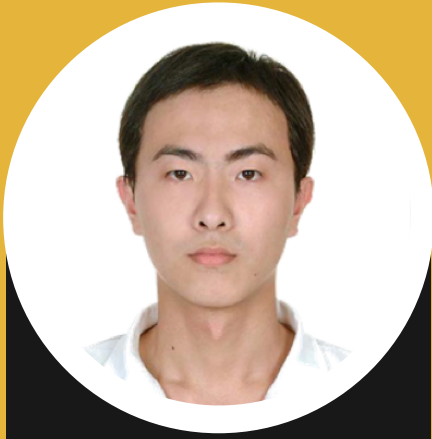
Hsien-Kai Liu

Vice General Manager of New Structure Group & H.M Liao ARCH & Building Research Institute and Structure Engineer (S.E.) of R.O.C

Hsien-Kai Liu joined NSG company in 2003. He has participated in the design of various types of structures, such as high-rise buildings, isolation structures, high-tech plants, structural reinforcement, energy dissipation design etc. He specializes in nonlinear structural analysis and seismic isolation design.

Mr. Liu is now a registered structural engineering of the Taipei Structure Engineering Association (TESA).

NSG was founded in 1976 by Dr. H.M.Liao. The company reputed with the two famous work in Taiwan, one is the first high-rise steel building in Taipei, introduced in 1981. And the other, Taipei Tzu Chi Hospital is the first large-scale earthquake-isolation hospital designed in 2000.



Experiences

- **Engineer, VIO Creation Technology Inc.**

Dr. Mu-sen Tsai

Vice General Manager of VIO

Dr. Mu-sen Tsai is currently as an vice general manager of VIO Creation Technology Inc. in Taiwan.

Dr. Tsai is in charge of designing devices to protect machines applied in semi conductor industry from earthquake damage. He has also designed isolation systems for institute of history and philosophy, Academia Sinica.