7th International Conference on Tall Buildings

29 – 30 October 2009
InterContinental Hotel, Grand Stanford Hong Kong
Final List of Papers

Keynote Papers

Harmonizing Tall Buildings in the Built Environment—
From The Perspective of Building Control in Hong Kong
Choi Kai Au

Holistic Considerations for Sustainable Tall Building Design
Andrew K. C. Chan

From Mass Production to Mass Customization
Ada Yin Suen Fung

Foundation System Design for Tall Buildings
Harry G. Poulos

The Architect and the Structural Engineer: Both Friends and Foes
Leslie E. Robertson

Invited Papers

Air Ventilation in Cities with Dense High-Rise Developments and Complex Topography
Edmund C. C. Choi

A Postcard from Dubai Design and Construction of Some of the Tallest Buildings in the World
Andy Davids, Julia Lai, Jonathan Wongso, Darko Popovic and Angus Mcfarlane

Application of Buckling-Restrained Braces in Steel Frameworks against Earthquakes
Guo-Qiang Li, Fei-Fei Sun, Su-Wen Chen and Xiao-Kang Guo

The Hong Kong Community College (Hung Hom Bay Campus)
A Case Study in Sustainability in Campus Design
Bernard V. Lim

The Environmental Design of Tall Buildings in High Density Subtropical Cities
Edward Ng, Justin Zhengjun He and Xipo An

Tall Buildings' Contribution to Sustainable Urbanisation and Growth: Less Take, More Give
Ziona Strelitz

Continuous Deep Beams on Spring Supports
Ning Zhang and Kang Hai Tan

Sustainable Development and Green Engineering (I)

The Humanism of Cities and Development Strategy of Tall Buildings
Liyong Jiang and Lu Gao

Designing Vital Urban Environments
Timothy Johnson

Strategizing Low Carbon And Low Energy Tall Building in China
Han Lin, Hong Wang and David Chin Shan Lee

High-Performance Concrete for Green Construction
Herbert W. Zheng, Fiona W. Y. Chan and Albert K. H. Kwan

Structural Identification and Retrofitting

Detection of Multiple Cracks on a Partially Obstructed Plate Following the Bayesian Approach
H. F. Lam, T. Yin and H. M. Chow

Optimal Sensor Placement Method for the Purpose of Structural Health Monitoring
H.F. Lam, H.M. Chow and T. Yin

Post-Compressed Plates for Strengthening Preloaded Rectangular Reinforced Concrete Columns
R. K. L. Su and Lu Wang

Nonlinear Analysis of FRP-Reinforced Concrete Slabs with A Shear-Locking Free Layered Composite Plate Element
Yong Zhu, Sarah Y. X. Zhang and R. K. L. Su

Seismic Engineering (I)

Performance-Based Design Approach for Seismic Design and its Application for Building Projects in China
Edward S. C. Chan, W. L. Leung and David C. S. Lee

Experimental Study of Seismic Performance of Short T-Shaped Columns with Diagonal Reinforcing Bars
Xuanming Huang and Wanlin Cao

Performance-Based Seismic Design for High-Rise Buildings
Man Kang, Yang Wang and Wei Liao

A Simplified MDOF Model for Seismic Analysis of Shear Wall-frame Structures
J. S. Kuang and Kai Huang

Analysis of Change in Dynamic Properties of Tall Building After Numbers of Earthquake Actions
Weixing Shi and Jiazeng Shan

Displacement-Based Rapid Seismic Assessment Procedure for Building Structures
H. H. Tsang, R. K. L. Su, N. T. K. Lam and S. H. Lo

Steel and Other Metallic Structures

Construction Monitoring of Tall Steel Structures
Xiangsheng Duan and Xiyuan Zhou

Study on Elasto-Plastic Similitude Relationship of Steel Pier Models
Wensheng Lu, Xiaoling Li, Meng Li and Xilin Lu

Numerical Analyses of Steel Beam-Column Joints Subjected to Catenary Action Under In-Plane Loading
Bo Yang and Kang Hai Tan

Numerical Analyses of Steel Beam-Column Joints Subjected to Out-Of-Plane Loading
Bo Yang and Kang Hai Tan

Web Crippling Tests of Aluminum Rectangular Hollow Sections
Feng Zhou and Ben Young

Fire Engineering

A Discussion on Technical Means of External Thermal Insulation and Fireproofing
Guangqi Ji and Jinping Wang

Fireproof Performance Test Research on Building Made of Sandwich Panels of Steel Mesh Cement with EPS
Guangqi Ji, Chunling Zhu, Xiwei Yang, Xiaoling Zhang, Baochun Feng, Yingshun Wang, Dexin Zhang, Xiaoyuan Hu and Jinping Wang

Fire Fighting in High-Rise Building
Shane Siu-Hang Lo

Experimental Research of Car-Fire Spread in Mechanical Parking Building Unit Adjacent to Tall Buildings
Xuan Sun, Wandi Wang and Wenguo Weng

Solution for Automatic Fire Detection and Fire Extinguishing in Large Space
Yuchen Sun and Yu Cao

Seismic Engineering (II)

Seismic Response Analysis of National Hall of China Pavilion for Expo 2010 Shanghai Considering Traveling-Waves Effects
Hai-Tao Bai, Jiang Qian and Jiang-Guang Yue

Study on Seismic Behavior of RC Composite Perforated Core Wall with Concealed Steel Truss Subjected to Combined Action
Weihua Chang, Wanlin Cao, Dongbin Li and Fuquan Xu

Seismic Performance Analysis Methodology of Large Span Architectural Curtain Walls
Wensheng Lu, Baofeng Huang and Wenqing Cao

Static-Dynamic Earthquake Analysis for Vibration Reduction of Shear Wall Structure Based on Equivalent Storey Model
Guangjun Sun, Aiqun Li, Zhiqiang Zhang, Ruixin Huang and Hong Jia

Seismic Analysis of Guang Dong Science Centre With or Without Base-Isolation: A Case Study
Yong Zhu, R.K.L. Su and Ji Chao Zhang

Sustainable Development and Green Engineering (II)

Green And Healthy Living in Public Housing
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Quality Living in High Rise Domestic Buildings through Building Services Design
Chi Shing Ho

Sustainable Public Housing Two Decades of Transformation in Maintenance and Management Practices
H. W. Pang, C. O. Chan, Allan Wong, L. S. Chan and Virgil K. L. Hsu

Architectural and Planning Issues

Access to and Manoeuvre in Super Highrise Building
Artur C. K. Au Yeung and Robert P.H. Lam

A New Urbanity
Stefan Krummeck

Sustainable Vertical Transportation System for Our Next Generation
Alkin Kwong

Remaining Virtuous in a Climate of Decadence: Delivery of Efficient and Practical Buildings in the Context of a Novelty-Minded Market
Alexander Lush

Tall Buildings & Urban Livability in Hong Kong
K. S. Wong

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Effects of Material Strength on Flexural Ductility of Reinforced Concrete Columns
Z.Z. Bai and Francis T. K. Au

Improving Flexural Ductility of High-Strength Concrete Columns
J. C. M. Ho and A. K. H. Kwan

Precast to Last-Hong Kong Public Housing Experience
Sze Chuen Lam and Kwok Chuen Chung

Displacement-Based Deformation Capacity Design Method of Steel Reinforced Concrete Structural Walls With High Axial Load Ratio
Kai Ze Ma and Xingwen Liang

Concrete Compressive Stress Distribution of RC Members Subjected to Flexure
Jun Peng, Johnny Ching Ming Ho, Hoat Joen Pam and Yuk Lung Wong

Cyclic Load Tests of Half Prefabricated Half Cast-in-Place Composite RC Walls
H.M. Zhang, X.L. Lu, J.B. Li, L. Lu and L.G. Wang

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Improving the Cost and Value of Tall Buildings Using Computational Design Optimisation
Chun-Man Chan and Mingfeng Huang

The Optimum Outrigger Locations in Outrigger-Braced Structures With Complex Objective
Guo-Kang Er, Xing-Hua Wang and Shuang-Wen Lan

Diagnosis and Treatment of Cracked Transfer Beams in Tall Buildings
Jianzhong Yang, Ni Wang, Guangjing Xiong and Qifei Yang

Case Based & Data Mining System of High-Rise Structure Intelligent Form Optimization
Shihai Zhang, Shujun Liu, Xiaoyan Liu and Jinping Ou Lan and Aiqun Li

Computer Modelling and Analysis/Innovative Technology

General Procedure of Formulating the Governing Equations for Analyzing Outrigger-Braced Structures
Guo-Kang Er and Vai Pan Iu

Universal 3D Connection Solid Elements for Building Analysis
S.H. Lo, D. Wu and K.Y. Sze

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Sustainability Through the Use of Quality and Green Materials
Joseph Y. W. Mak

Experimental Study on a Novel Self-Centering Rocking Device for Tall Buildings
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Application of Combined Isolator System in Multi-Body Structure
Wu Lan and Aiqun Li

Research on Buckling-Restrained Braced Frames With Fractional Order Differential Equations
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Time-Dependent Analysis of Frames Taking into Account Creep, Shrinkage and Cable Relaxation
Francis T. K. Au and X. T. Si

Time-Dependent Behaviour of Reinforced Concrete Multi-storey Building Frames Due to Shrinkage
C.H. Liu, Francis T. K. Au and Peter K. K. Lee

Estimation of Shrinkage With Creep Effects on Floor Structures of Multi-Story Reinforced Concrete Buildings Under Frame Effects
S. C. Lam and C. W. Law

Prediction of Concrete Creep by Multi-Layer Visco-Elastic Model
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Reinforced Concrete in Shear: A Modified Rotating-Angle Softened-Truss Model
H. F. Wong and J. S. Kuang

Case Studies

Design and Construction of an Effective Window Wall System in High Rise Condominiums: A Case Study
D. J. Caesar, R. C. Richman and K. D. Pressnail

Use of Glass Reinforced Concrete in the Construction of Bel-Air No. 8, Cyberport, Hong Kong
Daniel K. S. Kong, Andrew W. C. Kwong and Hugo H. N. Wong

Modular Flat Design for Public Housing
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The Design and Construction of a Fast-Track Casino/Hotel Project in Macau
David C. S. Lee, H. Y. Lee and Chester W. M. Chan

Office Development—Landmark East at 100 How Ming Street, Kwun Tong, Hong Kong
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Vibration/Wind Engineering

The Assessment of the Aerodynamic Performance of Building-Integrated Wind Turbines on Tall Building
Volker Buttgereit and Stefano Cammelli

Practical Application of CFD for Wind Loading on Tall Buildings
Gordon H. Clannachan, James B. P. Lim, Nenad Bicanic, Ian Taylor and Tom J. Scanlon

Application of Static-Dynamic Analytical Method to Vibration-Absorptive Analysis of High-Rise Buildings
Rui-Xin Huang and Ai-Qun Li

The Application of Wind Tunnel Study and Vibration Control in Building Design
C. L. Ng, K. C. Wong, David C. S. Lee and Brian Lim

Wind Loads on Tall Buildings in Hong Kong and Macau — A Comparative Study
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Vibration Measurement and Control of Tall Buildings Floor System for Human Comfort
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Foundation

Foundation Design For a Tall Tower in a Reclamation Area
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Comparative Study on Dynamic Soil-Structure Interaction System With Nonliquefiable and Liquefiable Soil by Using Shaking Table Model Test
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