

ASEA-SEC-5
OPENING SESSION
09:00 AM – 10:40 AM
DEC 1, 2020
V-ROOM A

Emerging Technologies and Sustainability Principles in Structural Engineering and Construction



9:35 – 10:05 am

Keynote Speaker I: John B. Mander

K-block (Kahukura) foyer

V-Room A:

<https://us02web.zoom.us/j/3365082496?pwd=MWh4WjhPbFZoS2RTdElQMWVOCUVSQT09>

PMI: 336-508-2496, Password: 395011



Title:

A Probabilistic Decision Theory for Preventative
Maintenance of Steel Bridge Structures

*Professor
Zachry Department of Civil Engineering
Texas A&M University
College Station, TX, US*

10:10 – 10:40 am

Keynote Speaker II: Bryan Pidwerbesky



*Technical Director – Pavements & Materials
Fulton Hogan Ltd
Christchurch, New Zealand*

K-block (Kahukura) foyer

V-Room A:

<https://us02web.zoom.us/j/3365082496?pwd=MWh4WjhPbFZoS2RTdElQMWVOCUVSQT09>

PMI: 336-508-2496, Password: 395011

Title:

Sustainable Pavements & Multi-Criteria Analysis

Tea & Coffee Break

10:40 am – 11:00 am



Next: Technical Session I
11:00 am – 13:00 pm, V-Rooms A and B



Technical Session I

11:00 am – 13:00 pm

V-Room A

Concrete Structures and Materials



Moderator:
Siamak Yazdani

Co-Moderator:
Ajith Thamboo

IT Staff:
Christina Chen

Presentation #	Name/Presenter	Presentation Title
1	Dennis Messerer and Klaus Holschemacher	CONFINEMENT OF RC COLUMNS WITH CFRCM
2	Keita Sugimoto	EFFECTS OF CONCRETE OVERLAY JOINT CONDITIONS AND STRAIN RATE ON SPLITTING TENSILE PROPERTIES
3	Klaus Holschemacher and Dennis Messerer	EFFECT OF SUBSTRATE PREPARATION ON THE LOAD-BEARING BEHAVIOR OF CFRP-CONFINED RC COLUMNS
4	Itaru Horiguchi	LONG-TERM PLANT-GROWING PERFORMANCE OF POROUS CONCRETE WITH VARYING AMOUNTS OF OYSTER SHELL AGGREGATE
5	Huang Hsing Pan	PIEZOELECTRIC PROPERTIES OF CEMENT PIEZOELECTRIC COMPOSITES CONTAINING NANO-QUARTZ POWDERS
6	Mohamed Tarek El-Hawary and Amr Maher Elnemr	USING CERAMIC WASTES IN CONCRETE MANUFACTURING FOR SUSTAINABLE CONSTRUCTION MATERIALS AS COARSE AGGREGATE REPLACEMENT
7	Mohammad S. Pourbehi and Breda (JAvB) Strasheim	A SLOT-CUTTING TECHNIQUE FOR REPAIR AND REHABILITATION OF CONCRETE DAMS AFFECTED BY ALKALI-SILICA REACTION
8	Hiroki Takahashi	FALL-DOWN TEST OF COLUMNS WITH LOWER PART CUTTING



Technical Session I

11:00 am – 13:00 pm

V-Room B

Project Management and Dispute Resolution



Moderator:
Asli Pelin Gurgun

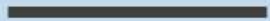
Co-Moderator:
Tak Wing Yiu

IT Staff:
Christina Chen

Presentation #	Name/Presenter	Presentation Title
1	Paul Stephanus Botha, Daniel van der Walt, and Eric Scheepbouwer	FACTORS THAT DETERMINE WHEN TO ENGAGE PRE- CONSTRUCTION SERVICES
2	Ramin Asadi	CONTRACTS EVALUATION THROUGH CLASSIFIED REWORK ROOT CAUSES IN THE CONSTRUCTION STAGE OF PROJECTS
3	Ghada Gad and Dana Dardoon	CONTINGENCY PERCEPTIONS OF TRADITIONAL VERSUS COLLABORATIVE-BASED CONSTRUCTION CONTRACT CLAUSES
4	Ulrike Quapp	COMPARISON OF ALTERNATIVE CONSTRUCTION DISPUTE RESOLUTION MEASURES
5	Eric Scheepbouwer	QUALIFICATION-BASED SELECTION OF CONSULTANTS AND CONTRACTORS: BREAKING THE LOWEST TENDER PRICE CULTURE
6	Sen Lin	USE OF INCENTIVE IN CONSTRUCTION: CARROT OR STICK
7	Keenan Nakagawa and Amarjit Singh	TROUBLES WITH A WIND FARM PROECT
8	Nan Cao	USING KPI FOR INCENTIVIZATION

Lunch Break

13:00 pm – 14:00 pm



Next: Technical Session II

14:00 pm – 16:00 pm, V-Rooms A and B



Technical Session II

14:00 pm – 16:00 pm

V-Room A

Infrastructure and Engineering Design



Moderator:
Vanissorn Vimonsatit

Co-Moderator:
Yuwei Li

IT Staff:
Christina Chen

Presentation #	Name/Presenter	Presentation Title
1	Hossein Askarinejad	EFFECT OF BASECOURSE AGGREGATE PROPERTIES ON STRENGTH OF FOAMED BITUMEN STABILIZED MATERIALS
2	Wen-Pei Sung	EXPERIMENTAL VERIFICATION FOR APPLYING NEUTRAL EQUILIBRIUM MECHANISM AS MULTIPLE VIRTUAL PIERS OF DISASTER RELIEF BRIDGE
3	Eisuke Kita	SIMULATION OF VEHICLE PLATOONS PASSING THROUGH INTERSECTION
4	Mohammad Ramezaniapour	PLANTER BOX RAINGARDEN FOR ZINC REMOVAL FROM STORM WATER
5	Ting Li, Shen Zhang	DEVELOPMENT AND APPLICATION OF GLOBAL-PROCESS TENSION ANALYSIS SOFTWARE FOR SUSPEND-DOME BASED ON ANSYS
6	Mark Milke	MOVING TO RESILIENCE AND ROBUSTNESS AND IMPLICATIONS FOR ENGINEERING DESIGN
7	Chuan-Tsung Lee and Huang Hsing Pan	RUDDER PROFILES OF POWER-FREE UNDERWATER VEHICLE FOR KUROSHIO POWER GENERATION
8	Mohammad Ramezaniapour	SIMULATION STUDY OF WATER REUSE SYSTEM FOR A REGENERATIVE HOUSEBOAT BY EPANET



Technical Session II
14:00 pm – 16:00 pm
V-Room B
Construction and Housing



Moderator:
Ulrike Quapp

Co-Moderator:
Ghada Gad

IT Staff:
Christina Chen

Presentation #	Name/Presenter	Presentation Title
1	Mohlomi Terah Raliile and Theodore Conrad Haupt	MACHINE LEARNING APPLICATIONS FOR MONITORING CONSTRUCTION HEALTH AND SAFETY LEGISLATION AND COMPLIANCE
2	John Tagiilima and Funmilayo Ebun Rotimi	REASONS FOR FAILURES IN INSPECTION REPORTS FOR RESIDENTIAL BUILDS
3	Mariam Akinlolu and Theodore Conrad Haupt	A BIBLIOMETRIC REVIEW OF TRENDS IN CONSTRUCTION SAFETY TECHNOLOGY RESEARCH
4	Rana Rabnawaz Ahmed and Xueqing Zhang	EXTENDED TRIPLE BOTTOM LINE BASED EVALUATION OF REVERSE LOGISTICS OPTIONS FOR CONSTRUCTION WASTE MATERIAL
5	Kerry Mulligan, Britta Basse, and Daphne Robson	BUBBLE WRAP OR SLIPPERS? THAT IS THE QUESTION: FROM HAMLET TO HOME INSULATION
6	Achini Weerasinghe	APPLICATION OF GREEN RETROFIT TECHNOLOGY: A SYSTEMATIC REVIEW
7	Kerim Koc	EFFECTS OF GEOTECHNICAL RISKS ON COST AND SCHEDULE IN INFRASTRUCTURE PROJECTS
8	Peter S.P. Wong	INSTITUTIONALIZING VIRTUAL REALITY BASED CONSTRUCTION PROFESSIONAL TRAINING

Tea & Coffee Break

16:00 pm – 16:30 pm



Next: Technical Session III
16:30 pm – 18:00 pm, V-Rooms A and B



Technical Session III

16:30 pm – 18:00 pm

V-Room A

Structural and Earthquake Engineering



Moderator:
Chao Wu

Co-Moderator:
Kaveh Andisheh

IT Staff:
Christina Chen

Presentation #	Name/Presenter	Presentation Title
1	Shen Zhang	DEVELOPMENT AND APPLICATION OF ISOLATION BEARING ELEMENT CONSIDERING BI-DIRECTIONAL COUPLED INTERACTION
2	Sonam Dorji	SEISMIC DESIGN OF MASONRY-INFILLED FRAMES – A REVIEW OF CODIFIED APPROACHES
3	Valentina Villa	VULNERABILITY ASSESSMENT OF A CIVIC TOWER USING AMBIENT VIBRATION TESTS
4	Marija Demsic, Mario Uros, and Marta Savor Novak	TORSION EFFECTS IN BUILDING SEISMIC PERFORMANCE
5	Alberto Viskovic	STORY VERTICAL POST-COMPRESSION FOR TIMBER BUILDINGS: A NEW SYSTEM FOR SEISMIC IMPROVEMENT OF CLT WALLS
6	Masahiro Sakano	FATIGUE DURABILITY OF INTERSECTIONS BETWEEN LONGITUDINAL AND TRANSVERSE RIBS IN LARGE-SIZED TROUGH RIB OSD



Technical Session III
16:30 pm – 18:00 pm
V-Room B
Steel and Timber Structures



Moderator:
Klaus Holschemacher

Co-Moderator:
Mohammad Pourbehi

IT Staff:
Christina Chen

Presentation #	Name/Presenter	Presentation Title
1	Bin Xu	NONPARAMETRIC NONLINEARITY IDENTIFICATION WITH AN UPDATED EKF APPROACH USING DYNAMIC RESPONSE FUSION
2	Masahiro Sakano	FATIGUE BEHAVIOR OF RIVETED GIRDERS WITH SPLICE JOINTS – A CASE STUDY
3	Md Tanvir Rahman	ASSESSMENT OF SHEAR ANALOGY AND TIMOSHENKO METHOD FOR ANALYZING HYBRID CLT UNDER OUT-OF-PLANE LOADING
4	Yuki Shirai and Kazushi Shimazaki	PERFORMANCE OF PRESTRESSED CONCRETE BEAM INCORPORATING AN AXIAL YIELD DAMPER USING UNBONDED REBAR
5	Amr Maher Elnemr	NONLINEAR FINITE ELEMENT MODELING OF POST-TENSION RC AND RC BEAMS STRENGTHENED WITH NSM FRP RODS
6	Xin Li	PULL-OUT RESISTANCE OF SELF-TAPPING SCREWS IN CROSS-LAMINATED TIMBER MADE FROM RADIATA PINE

CLOSING SESSION

18:00 PM – 18:30 PM

V-ROOM A

