

The 3rd
SCEScm

PROGRAM

The 3rd International Conference on
Sustainable Civil Engineering Structures
and Construction Materials

Sustainable Structures for Futures Generation

September 5-7, 2016
Bali, Indonesia

PREFACE

Dear readers and participants,

The 3rd International Conference on Sustainable Civil Engineering Structures and Construction Materials (SCESCM), held in Bali on the 5th to 7th September 2016, is the continuation of the previous conferences which were successfully held in Yogyakarta in the year 2012 and 2014. This biannual conference was initiated by Gadjah Mada University of Indonesia, the Karlsruhe Institute of Technology of Germany and the Hokkaido University of Japan and has been recognized over the world since the 2nd International Conference was held. The initiators considered that more involvement of local and international universities will more enliven the conference and enable more knowledge to be shared. At the time being, 11 organizing universities and 3 initiating universities are responsible for organizing and supporting this conference.

Since the 2nd International Conference, most presented papers have been accepted by the Science Direct of PROCEA ENGINEERING. The organizing committee of the 3rd International Conference received more than 400 abstracts, and after being reviewed there were still 399 titles eligible for full paper submission. Due to time constraints of the conference, the committee allows only 197 papers to be presented in the conference. This great enthusiasm of researchers to join the conference was also shown by the inquiry to submit papers beyond the closing date of the submission.

It is really hoped that the 3rd International Conference, which brings up the theme: **“sustainable structures for future generation”**, will disseminate research results and share knowledge of long and continuous researches which do not only develop the technology that follows the science but also consider the sustainability of the structures and the surrounding environment. This conference will also introduce one of the beautiful cultures of Indonesia by performing Balinese Dances during the welcome dinner. The committee also provides a cultural tour for the spouses of participant and other optional cultural tours on the day after the completion of the conference.

The 3rd International Conference can be held thanks to the contribution of the organizing institutions, those are Diponegoro University, Sebelas Maret University, Petra Christian University, Atma Jaya Yogyakarta University, Islamic University of Indonesia, Parahyangan Catholic University, Sultan Agung Islamic University, and also from other countries, those are Delft University of Technology - Netherlands, Lehigh University of Pennsylvania - USA, Nihon University - Japan, Eindhoven University of Technology - Netherlands, which have been working hand in hand to make this conference successful. The conference is enlightened by the presence of students of the organizing institutions who won “the pin contest” and is the announcement of the best student papers at the closing ceremony of the conference.

On behalf of the organizing committee and organizing institutions I would like to deliver my gratitude to participants and various parties who have contributed their financial support for the success of this conference, especially to : The Indonesian Directorate General of Higher Education, PT. BRANTAS ABIPRAYA, PT. ADHI KARYA, PT. Pembangunan Perumahan, PT Waskita Karya, PT Pamapersada Nusantara, PT SCG READYMIX Indonesia, and PT. FYFE FIBRWRAP INDONESIA. A great appreciation is also conveyed to professional organizations; the Indonesian Society of Civil and Structural Engineers, Asian Concrete Federation, Japan Society of Civil Engineers, International Federation for Structural Concrete (FIB), the International Association for Bridge and Structural Engineering, Ministry of Public Works and Housing of Indonesia. Last but not least my deepest appreciation is also delivered to honorable reviewers who have worked hard to evaluate the papers for adequacy of substances and quality of research.

Thank you for the nice participations, I wish you enjoy staying in Bali, Indonesia and may God be with you always.

Prof. Henricus Priyosulistyo, M.Sc., Ph.D.
Chairman of the Conference.

GENERAL INTRODUCTION

International Conference on Sustainable Civil Engineering Structures and Construction Materials

The concept of **sustainability** has been gradually applied in various aspects of civil engineering structures. Gadjah Mada University Indonesia, Hokkaido University Japan and Karlsruhe Institute of Technology German agreed to have some various series of international conferences to discuss the concept as indicated by high efficiency in human and material resources, but less about how environmental impacts shall be further implemented in design, construction and maintenance of every civil engineering structure. In that regard, the 1st International Conference on Sustainable Civil Engineering Structures and Construction Materials was well conducted in the year 2012 in Yogyakarta – Indonesia.

Taking into account many aspects, Gadjah Mada University Indonesia, Hokkaido University Japan and Karlsruhe Institute of Technology German (the initiators universities) decided to conduct the 2nd conference in the year 2014 in Yogyakarta - Indonesia. Three other neighboring universities (Atma Jaya Yogyakarta University, Islamic University of Indonesia, Diponegoro University Indonesia) was asked to support the implementation of the 2nd conference. There were 197 papers to be presented in the conference. Then, selected papers were published in the Science Direct of Procedia Engineering.

In the year 2016, the initiator universities continue to organize the 3rd SCESCM International Conference in Bali – Indonesia. The 3rd conference brings up the theme “Sustainable Structures for Future Generation”. There are 11 universities/colleges participating the conference as the organizing institutions, those are Diponegoro University - Indonesia, Sebelas Maret University - Indonesia, Petra Christian University-Indonesia, Atma Jaya Yogyakarta University - Indonesia, Indonesian Islamic University - Indonesia, Parahiyangan Catholic University – Indonesia, Sultan Agung Islamic University - Indonesia, Delft University of Technology - Netherlands, Lehigh University of Pennsylvania - USA, Nihon University - Japan, Eindhoven University of Technology – Netherlands. In the 3rd conference, all accepted papers are published in a special issue of Elsevier Procedia Engineering indexed by Scopus.

About Bali, Indonesia

Bali is an island and province in Indonesia. The province includes the island of Bali and a few smaller neighboring islands, notably Nusa Penida, Nusa Lembongan, and Nusa Ceningan. It is located at the western most end of the Lesser Sunda Islands, between Java to the west and Lombok to the east. Its capital of Denpasar is located at the southern part of the island.

Bali is a popular tourist destination, which has seen a significant rise in tourists since the 1980s. It is renowned for its highly developed art, including traditional and modern dance, sculpture, painting, leather, metalworking, and music. The Indonesian International Film Festival is held every year in Bali.

Bali is part of the Coral Triangle, the area with the highest biodiversity of marine species. In this area alone over 500 reef building coral species can be found. For comparison, this is about 7 times as many as in the entire Caribbean.

Bali received the Best Island award from Travel and Leisure in 2010. The island of Bali won because of its attractive surroundings (both mountain and coastal areas), diverse tourist attractions, excellent international and local restaurants, and the friendliness of the local people.

CONFERENCE PROGRAM

Monday, September 5, 2016

07.30 - 08.00	REGISTRATION						
08.00 - 08.30	OPENING SPEECHES						
08.30 - 10.30	PLENARY SESSION I						
Room							
Chair Person	Han Ay Lie						
Keynote Speaker	1. Harald S Mueller, Karlsruhe Institute of Technology, Germany (P-KEY-3)						
	2. Tamon Ueda, Hokkaido University, Japan (P-KEY-8)						
	3. Klaasvan Breugel, TU.Delft, Netherlands (P-KEY-6)						
	4. Hyoung Jin Choi, Inha University, South Korea (P-KEY-7)						
10.30 - 11.00	PHOTO SESSION AND COFFEE BREAK						
11.00 - 12.50	TECHNICAL SESSION I						
Room	Tabanan Room	Amlapura Room	Bangli Room	Singaraja Room	Bedugul Room	Griya Agung Ballroom	Mangapura Room
Chair Person	Iman Satyarno	Mochamad Teguh	Bambang Suryoatmono	Henricus Priyosulistyo	Antoni	Harijanto Setiawan	Suharyanto & Anita Firmanti
	P-INV-3 A.J.M. Leijten	P-INV-10 H. M. Jonkers	P-INV-12 Mochamad Agung Wibowo	P-INV-17 Tam Chat Tim	P-INV-15 Petr Hajek	P-INV-16 Salman Azhar	SPEC-MY Masahiro Yoshimura
	S-AC-169	M-HP-242	C-ST-61	S-SH-98	S-ST-264	C-ES-254	PUPR - 01
	S-AC-68	M-HP-137	C-ST-88	S-SH-229	S-ST-165	C-ES-158	PUPR - 02
	S-AC-69	M-HP-154	C-ST-118	S-SH-83	S-ST-73	C-MT-148	PUPR - 03
	S-AC-261	M-HP-164	C-ST-162	S-SH-133	S-ST-195	C-MT-176	PUPR - 04
	S-AC-44	M-HP-36	C-MT-1	S-SH-231	S-ST-189	SPEC-BJ	
	S-AC-156	M-HP-30		S-SH-181			
12.50 - 13.50	LUNCH						

13.50 - 15.25	TECHNICAL SESSION II						
Room	Tabanan Room	Amlapura Room	Bangli Room	Singaraja Room	Bedugul Room	Griya Agung Ballroom	Mangapura Room
Chair Person	Yoyong Arfiadi	Ary Setiawan	Ali Awaludin	Dina Rubiana Widarda	Antonius	Salman Azhar	Anton Soekiman
Invited Speaker	P-INV-6 B. H. W. Hadikusumo	P-INV-7 Bambang Suryoatmono	P-INV-1 Ade Lisantono	P-INV-18 Senot Sangadji	P-INV-13 Mochamad Teguh	P-INV-11 Iman Satyarno	SPEC-BJ Barry Jones
	B-UE-191	S-AC-55	M-DU-15	S-EQ-170	S-SD-236	S-RR-5	PUPR - 05
	B-UE-245	S-AC-138	M-DU-29	S-EQ-43	S-EQ-71	S-RR-53	PUPR - 06
	B-UE-25	S-AC-211	M-DU-151	S-EQ-19	S-EQ-92	S-RR-143	PUPR - 07
	E-SE-106	S-AC-57	M-DU-155	S-EQ-97	S-EQ-64	S-RR-221	PUPR - 08
	E-SE-2	S-AC-244	M-DU-219		S-EQ-35	S-RR-200	PUPR - 15
15.25 - 15.55	COFFEE BREAK						
15.55 - 17.25	TECHNICAL SESSION III						
Room	Tabanan Room	Amlapura Room	Bangli Room	Singaraja Room	Bedugul Room	Griya Agung Ballroom	Mangapura Room
Chair Person	Ade Lisantono	SholihinAs'ad	H. M. Jonkers	Klaas van Breugel	Gary Ong-KhimChye	Tam Chat Tim	Suprpto
	S-ST-130	S-CS-12	S-CS-132	S-CS-28	S-OI-157	S-TB-62	PUPR - 09
	S-ST-147	S-CS-123	S-CS-145	S-CS-246	S-OI-37	S-TB-172	PUPR - 10
	S-ST-173	S-CS-232	S-CS-203	S-CS-33	S-OI-67	S-TB-175	PUPR - 11
	S-ST-100	S-CS-32	S-CS-225	S-CS-227	S-OI-194	S-TB-202	PUPR - 12
	S-ST-59	S-CS-127	S-CS-120	S-CS-18	S-SD-215	S-SE-121	PUPR - 13
	S-ST-101	S-CS-86	S-CS-223	S-CS-183	S-SD-216		PUPR - 14
17.25 - 18.00	FREE SESSION						
18.00 - 21.00	WELCOME DINNER AT SANUR PARADISE PLAZA						

Tuesday, September 6, 2016

07.30 - 08.00	REGISTRATION						
08.00 - 10.00	PLENARY SESSION II						
Chair Person	Buntara Sthenly Gan						
Keynote Speaker	1. Stephen Pessiki, Lehigh Universty, U.S.A (P-KEY-4)						
	2. Gary Ong Khim Chye, National University of Singapore, Singapore (P-KEY-2)						
	3. Billie F. Spencer, University of Illinois, U.S.A (P-KEY-1)						
	4. Masahiro Yoshimura, National Cheng Kung University, Taiwan (P-KEY-5)						
10.00 - 10.30	COFFEE BREAK						
10.30 - 12.20	TECHNICAL SESSION IV						
Room	Tabanan Room	Amlapura Room	Bangli Room	Singaraja Room	Bedugul Room	Griya Agung Ballroom	Mangapura Room
Chair Person	A.J.M. Leijten	Senot Sangadji	B. H. W. Hadikusumo	Ima Muljati	Petr Hajek	Stephen Pessiki	Hyoungjin Choi
Invited Speaker	P-INV-14 Paolo Mele	P-INV-2 Tamio Endo	P-INV-9 Benjamin Lumantarna	P-INV-8 Buntara Sthenly Gan	P-INV-5 Antonius	P-INV-4 Anita Firmanti	
	M-DU-141	T-SP-178	M-LR-65	S-RR-9	M-SC-139	C-EM-23	S-SD-257
	M-DU-208	T-SP-179	M-SC-185	S-RR-13	M-SC-27	C-EM-40	S-SD-134
	S-SE-79	T-SP-50	M-SC-188	S-RR-42	M-SC-95	C-EM-70	S-SD-110
	M-LR-58	T-TE-46	M-SC-90	S-SE-66	M-SC-161	C-EM-182	S-SD-119
	M-LR-87	T-TE-187	M-SC-114	S-SE-174	M-SC-240	C-EM-10	S-SD-210
	M-LR-105	T-TE-255	M-SC-108		M-SC-243	C-MT-47	S-SD-251
		T-TE-258					
12.20 - 13.20	LUNCH						
13.20 - 15.05	TECHNICAL SESSION V						
Room	Tabanan Room	Amlapura Room	Bangli Room	Singaraja Room	Bedugul Room	Griya Agung Ballroom	Mangapura Room
Chair Person	Suharyanto	Bagus Hario Setiadji	Jati Utomo Dwi Hatmoko	Benjamin Lumantarna	Inggar Septhia Irawati	Suprpto Siswosukarto	Ashar Saputra
	W-RE-94	T-SP-239	M-SC-163	M-SC-213	G-SM-99	G-ST-77	C-SM-11
	W-RE-115	T-SP-116	M-LR-218	M-SC-256	G-SM-193	G-ST-107	C-SM-80
	W-RE-149	T-SP-104	M-LR-52	M-GP-41	G-SM-224	G-ST-129	C-SM-204
	W-RE-235	T-SP-186	M-LR-247	M-GP-113	G-SM-17	G-ST-233	C-SM-205
	W-RE-262	T-SP-207	M-LR-160	M-GP-197	G-SM-82	G-ST-6	C-SM-228
		T-SP-234	M-LR-103	M-SC-78			
		T-SP-60					
15.05 - 15.35	COFFEE BREAK						
15.35 - 15.50	CLOSING						
	1. Presentation SCESCM 2018						
	2. Closing by Conference Chair						

LIST OF PAPER ID

Keynote Speakers

- P-KEY-1 Next generation wireless smart sensors toward Sustainable Civil Infrastructure
- P-KEY-2 Sustainable construction for Singapore's urban infrastructure – some research findings
- P-KEY-3 Design, material properties and structural performance of sustainable concrete
- P-KEY-4 Sustainable seismic design
- P-KEY-5 Importance of soft processing (low energy production) of advanced materials for sustainable society
- P-KEY-6 Societal burden and engineering challenges of ageing infrastructure
- P-KEY-7 Smart graphene oxide based composite materials and their electric and magnetic stimuli-response
- P-KEY-8 Effects of temperature and moisture on concrete-PCM interface performance

Invited Speakers

- P-INV-1 Shear behavior of high-volume fly ash concrete as replacement of Portland-Cement in RC Beam
- P-INV-2 Composite engineering – direct bonding of plasticPET films by plasma irradiation
- P-INV-3 Europe goes green
- P-INV-4 Wood frame floor model of LVL Paraserianthes falcataria
- P-INV-5 On the confined high-strength concrete and need of future research
- P-INV-6 Role of organizational factors affecting worker safety behavior: a bayesian belief network approach
- P-INV-7 Numerical study on alternate block shear failure mode of structural tee section loaded in tension
- P-INV-8 Post-buckling behaviour of axially FGM planar beams and frames
- P-INV-9 Local wisdom to a sustainable non-engineered brick building
- P-INV-10 Toward bio-based geo- & civil engineering for a sustainable society
- P-INV-11 Full height rectangular opening castellated steel beam partially encased in reinforced mortar
- P-INV-12 Supply chain management strategy for recycled materials to support sustainable construction
- P-INV-13 Experimental evaluation of masonry infill walls of RC frame buildings subjected to cyclic loads
- P-INV-14 Nanostructured oxide thin films for sustainable development
- P-INV-15 Concrete structures for sustainability in a changing world
- P-INV-16 Role of visualization technologies in safety planning and management at construction jobsites
- P-INV-17 EN 206 conformity testing for concrete strength in compression
- P-INV-18 Can Self-healing mechanism helps concrete structures sustainable?

Building and Urban Engineering

- B-UE-25 Optimization of sustainable house in urban area
- B-UE-191 Energy-efficient building retrofit - Engineered transparency
- B-UE-245 Urban farming construction model on the vertical building envelope to support the green buildings development in Sleman, Indonesia

Construction Engineering Management

- C-EM-10 Producing alternative concept for the Trans-Sumatera toll road project development using location quotient method
- C-EM-23 Developing a self-assessment model of risk management maturity for client organizations of public construction projects: Indonesian context
- C-EM-40 Neural Network for the Standard Unit Price of the Building Area
- C-EM-70 Impact factors on the cost calculation for building services within the built environment
- C-EM-182 Comparing performance of government and private clients in construction projects : contractors' perspective

Construction Sustainability in Engineering

- C-ES-158 Use of life cycle assessments in the construction sector: critical review
- C-ES-254 The sustainable infrastructure through the construction supply chain carbon footprint approach

Construction Method, Technology and System

- C-MT-1 Retrofitting in the middle of project execution: a case public hospital building
- C-MT-47 Industrialized timber building systems for an increasing market share - a holistic approach targeting construction management and building economics
- C-MT-148 Dynamic modeling of the relation between bidding strategy and construction project performance
- C-MT-176 Building information modeling in the architecture-engineering-construction project in Surabaya.

Construction Strategic Management

- C-SM-11 Significant factors to motivate small and medium enterprise (SME) construction firms in the Philippines to implement ISO 9001:2008
- C-SM-80 The critical point in the certification system for project manager in Indonesia
- C-SM-204 Innovation performance of large contractor in Indonesia: influencing factors and its impact on firm's performance
- C-SM-205 Innovativeness: a key factor to support contractors business success
- C-SM-228 Strategy for small-medium scale contractor performance improvement in ASEAN competitive market

Construction Safety Management

- C-ST-61 A model of integrated multilevel safety intervention practices in Malaysian construction industry
- C-ST-88 Identification of safety culture dimensions based on the implementation of OSH management system in construction company
- C-ST-118 Multi-level safety culture affecting organization safety performance: a system dynamic approach
- C-ST-162 Model of the maturity of pre-construction safety planning

Environmental Sustainability Engineering

- E-SE-2 Implementation, management, and cost of the clean water act and storm water pollution prevention plan
- E-SE-106 Nitrogen removal from landfill leachate via ex-situ nitrification and in-situ denitrification in laboratory scale bioreactor

Geotechnical Soil mechanics

- G-SM-17 Forensic assessment on near surface landslide using electrical resistivity imaging (ERI) at Kenyir Lake area in Terengganu, Malaysia
- G-SM-82 The effect of bottom drainage channels type on seepage percentage
- G-SM-99 Settlement of residential houses supported by piled foundation embedded in expansive soil
- G-SM-193 Evaluation of frost heave pressure characteristics in transverse direction to heat flow
- G-SM-224 Analysis of the seepage due to the thawing of permafrost, considering the gradient of the impermeable layer

Geotechnical Soil stabilization and improvements

- G-ST-6 Shear behavior of calcium carbide residue - bagasse ash stabilized expansive soil
- G-ST-77 A study of the effectiveness of the use of cement and bottom ash towards the stability of clay in terms of UCT Value
- G-ST-107 Effect of clay core configuration of the rockfill dams against hydraulic fracturing
- G-ST-129 Back calculation of excessive deformation on deep excavation
- G-ST-233 Suggested graph of geotextile reinforcement against the several variation of field condition based on the soft clay soil in Java island area

Materials Science and Engineering Durability and Service Life

- M-DU-15 Resistance of concrete with calcium stearate due to chloride attack tested by accelerated corrosion
- M-DU-29 Study of pitting resistance of rebar steel in Jakarta coastal using simulated concrete pore solution
- M-DU-141 Effect of pit distance on failure probability of corroded RC beam
- M-DU-151 Influence of vacuum mixing on the carbonation resistance and microstructure of reactive powder concrete containing secondary copper slag as supplementary cementitious material (SCM)
- M-DU-155 Compressive strengths and chloride penetration tests of modified type IP cement concrete with rice ash
- M-DU-208 Need for further development in service life modelling of concrete structures in chloride environment
- M-DU-219 Properties of plain and blended cement concrete immersed in acidic peat water canal

Materials Science and Engineering Geopolymer and Alkali Activated Materials

- M-GP-41 Mechanical and durability performance of novel self-activating geopolymer mortars
- M-GP-113 Effect of curing temperature and fiber on metakaolin-based geopolymer
- M-GP-197 Geopolymer concrete: a sustainable cement based concrete for the future

Materials Science and Engineering High Performance Construction Materials

- M-HP-30 An alternative method for determining tensile properties of engineered cementitious composites
- M-HP-36 Effect of temperature on precipitation rate of calcium carbonate produced through microbial metabolic process of bio materials
- M-HP-137 Mechanical properties of concrete with *Enterococcus faecalis* and calcium lactate
- M-HP-154 Recommendations based on experimental observations to design a printable cement-based material for construction.
- M-HP-164 *Bacillus subtilis* HU58 immobilized in micropores of diatomite for using in self-healing concrete
- M-HP-242 The use of alkaliphilic bacteria-based repair solution for porous network concrete healing mechanism

Materials Science and Engineering Local and Recycled Materials

- M-LR-52 Determining moisture levels in straw bale construction
- M-LR-58 The influence of PET plastic waste gradations as coarse aggregate towards compressive strength of lightweight concrete structure
- M-LR-65 Experimental study of fly ash density effect to the mortar compressive strength with recycled fine aggregate
- M-LR-87 Mechanical properties of concretes with recycled aggregates and waste brick powder as cement replacement
- M-LR-103 Potential of substituting waste glass in aerated lightweight concrete
- M-LR-105 Improving of recycled aggregate quality by thermal-mechanical-chemical process
- M-LR-160 Proportioning, microstructure and fresh properties of self compacting concrete with recycled sand
- M-LR-218 Properties of concrete containing ground waste cockle and clam seashells
- M-LR-247 Utilization of polystyrene waste for wall panel to produce green construction materials

Materials Science and Engineering Sustainable Cementitious Materials

- M-SC-27 Valorization of the crushed dune sand in the formulation of self-compacting-concrete
- M-SC-78 Improvement of roller-compacted concrete's workability by using poly naphthalene sulfonate superplasticizer
- M-SC-90 Calcium silicate board as wall-facade
- M-SC-95 Compressive strength of mortar containing ferronickel slag as replacement of natural sand
- M-SC-108 The effect of seawater curing to the correlation between split tensile strength and modulus of rupture in high strength concrete incorporating rice husk ash
- M-SC-114 Physical and mechanical properties of WPC board from Sengon wood waste and recycled HDPE plastic
- M-SC-139 Characterization of fly ash using electrochemical impedance spectroscopy
- M-SC-161 Creep behaviour of self-compacting concrete containing high volume fly ash and its effect on the long-term deflection of reinforced concrete beam deflection
- M-SC-163 Investigation of agro-concrete using by-products of rice husk in Mekong delta of Vietnam
- M-SC-185 Delamination tendency of repair mortar incorporating crumb rubber

- M-SC-188 Effect of phosphogypsum on the properties of Portland cement
- M-SC-213 Optimizing polycarboxylate based superplasticizer dosage with different cement type
- M-SC-240 Influence of the stiffness modulus and volume fraction of inclusions on compressive strength of concrete
- M-SC-243 Thermal conductivity and compressive strength of lightweight mortar utilizing pumice breccia as fine aggregate
- M-SC-256 Effect of the fibre geometry on pull-out behaviour of HVFA mortar containing nanosilica

Structural Analysis & Computational Mechanics

- S-AC-44 Numerical modelling of hexagonal castellated beam under monotonic loading
- S-AC-55 Numerical analysis of R/C cylindrical shell with hoop edge beams
- S-AC-57 Structural characteristics of Hagia Sophia under consideration of the ribs inside the dome
- S-AC-68 Development of DKMQV element for buckling analysis of shear-deformable plate bending
- S-AC-69 Lateral torsional buckling of castellated beams analyzed using collapse analysis
- S-AC-138 Numerical analysis of RC column accompanied with friction damping mechanism under cyclic loading
- S-AC-156 Numerical analysis on residual strength of corroded steel plates under uniaxial compression
- S-AC-169 Analytical study of building height effects over steel plate shear wall behaviour
- S-AC-211 Numerical approximation of acoustic equation using radial basis function-discontinuous Galerkin method
- S-AC-244 Three dimensional non-linear finite element analysis of circular reinforced concrete column confined with CFRP using plasticity model
- S-AC-261 FE Modelling of optimization on strengthening glulam timber beams by using compressed wood blocks

Structural Concrete Structures

- S-CS-12 Risk analysis and priority determination of risk prevention using failure mode and effect analysis method in the manufacturing process of hollow core slab
- S-CS-18 Analysis on nonlinear bending behaviors of CFRP beams by section partition method
- S-CS-28 Response of reinforced concrete frame structures under blast loading
- S-CS-32 Seismic behaviour of fibre reinforced steel-concrete composite systems
- S-CS-33 Flexural behavior of precast hollow core slab using PVC pipe and styrofoam with different reinforcement
- S-CS-86 Damage process of concrete around anchor frame inside footing for steel pier
- S-CS-120 Experimental analysis of anchor bolt in concrete under the pull-out loading
- S-CS-123 Concrete strength enhancement due to external steel ring confinement
- S-CS-127 Analysis and design of shear wall coupling beam using hybrid steel truss encased in reinforced mortar
- S-CS-132 Analysis and design of reinforced concrete beam-column joint using King Cross steel profile
- S-CS-145 Shear and flexural capacity of reinforced concrete members with circular cross section
- S-CS-183 Corrosion risk of RC buildings after ten years the 2004 tsunami in Banda Aceh, Indonesia
- S-CS-203 Influence of reinforcing bar types on flexural behaviour of R-UHPFRC
- S-CS-223 Safety performance of concrete structures in Indonesia

- S-CS-225 Shear behavior of fiber foam reinforced concrete beams
- S-CS-227 Staged analysis of RC frame retrofitted with steel braces in low and medium-rise buildings
- S-CS-232 Study on shear behavior of concrete-polymer cement mortar at elevated temperature
- S-CS-246 Use of aluminum alloy plates as externally bonded shear reinforcement for R/C beams

Structural Earthquake and Seismic Engineering

- S-EQ-19 Modelling of a concrete dam under earthquake loading by a nonlocal microplane approach
- S-EQ-35 Performance of direct displacement based design on regular concrete building against Indonesian response spectrum
- S-EQ-43 Preliminary seismic hazard assessment of the Oral and Dental Hospital of Jenderal Soedirman University Indonesia
- S-EQ-48 Seismic isolation of La Meynard Hospital, Martinique, France
- S-EQ-49 Railway bridges seismic protection with Isosism® range
- S-EQ-64 New technology on seismic reinforcement of pile foundation for long life bridges
- S-EQ-71 Seismic performance evaluation of Indonesian existing R/C building considering brick infill effects
- S-EQ-92 Experimental verification of seismic strengthening by wing wall installation for RC buildings with substandard beam-column joints
- S-EQ-97 Searching a simple damage potential of earthquake low frequency contents based on global RC inelastic response
- S-EQ-170 Assessing seismic performance of moment resisting frame and frame-shear wall system using seismic fragility curve

Structural Optimization and innovation in structural design

- S-OI-37 Development of building structural system using Isotruss® grid
- S-OI-67 Preliminary design of tall building structures with a hexagrid system
- S-OI-157 Optimization analysis of size and distance of hexagonal hole in castellated steel beams
- S-OI-194 Evolutionary ACO algorithm for truss optimisation problems

Structural Evaluation, Repair and Retrofitting

- S-RR-5 Application of CFRP sheets repair to an existing steel girder end
- S-RR-9 Experimental study on the concrete surface preparation influence to the tensile and shear bond strength of synthetic wraps
- S-RR-13 Revitalization of cracked flexural members using retrofitting and synthetic wrapping
- S-RR-42 Flexural capacity of strengthened reinforced concrete beams with side bonded steel plate
- S-RR-53 Durability of reinforced concrete beams strengthened using GFRP sheet due to fatigue loads
- S-RR-143 Evaluation of building retrofitting alternatives from sustainability perspective
- S-RR-200 Hybrid CFRP-based retrofitting technique to increase the flexural resistance and concrete confinement of RC columns submitted to axial and cyclic lateral loading
- S-RR-221 Retrofitting of low rise reinforced concrete building using external bolted steel plates (case study: SPS building, Jimbaran, Bali, Indonesia)

Structural dynamics

- S-SD-110 Vibration serviceability of Grha Sabha Pramana auditorium under human-induced excitation
- S-SD-119 Experimental study on vibration characteristics of prestressed concrete beam
- S-SD-134 Flutter analysis of cable stayed bridge
- S-SD-210 Nonlinear controllers for active composite tuned mass dampers
- S-SD-215 Influence of Vibration of Human Activity upon A Simple Supported Slab with Tuned Mass Damper (TMD) and Fibre Reinforced Rubber (FRR) Absorber
- S-SD-216 Prediction of allowable lateral ground acceleration (in-plane direction) of confined masonry walls using ambient vibration (microtremor) analysis
- S-SD-236 The behavior semi-precast slab under dynamic load
- S-SD-251 Wind resistant design of Ngarai Sianok bridge in Bukittinggi, West Sumatera, Indonesia
- S-SD-257 Dynamic properties evaluation of a platform structure.

Structural Engineering

- S-SE-66 Compressive behaviour of short steel columns strengthened with carbon fiber sheets
- S-SE-79 Corrosion damage analysis of steel frames considering lateral torsional buckling
- S-SE-121 The performance of cold-formed steel long - span roof structure using the application of laminated timber: cold-formed steel – laminated timber composite
- S-SE-174 Influence of charge shape and orientation on the response of steel-concrete composite panels

Structural Health Monitoring System

- S-SH-83 Residual stress on K-area of link element using neutron diffraction method
- S-SH-98 Development of an automatic detector of cracks in concrete using machine learning
- S-SH-133 Development of stereo imaging analysis for measuring small deformation
- S-SH-181 Comparative study of mode shapes curvature and damage locating vector methods for damage detection of structures
- S-SH-229 Structural test of Arfak traditional house in Papua, Indonesia
- S-SH-231 Evaluation of bending behavior of flexible pipe using digital image processing

Structural Statics

- S-ST-59 Load carrying capacity of an arch subjected to the load in one half
- S-ST-73 Fabrication accuracy and material properties of spiral-laminated CFRP specimens made of uni-directional (UD) Prepreg
- S-ST-100 System dynamic approach for bridge deterioration monitoring
- S-ST-101 Performance of headed stud on steel-concrete composite bridge deck as shear connector subjected to normal force
- S-ST-130 Visual examination of flexural cracking behaviors in a helicoidally laminated composite
- S-ST-147 Design of a high crest profile of a GFRP composite roofing sheets
- S-ST-165 Modeling the cyclic response of perfobond-rib shear connectors
- S-ST-173 Bending characteristics of helicoidal laminated CFRP
- S-ST-189 Effect of span length on behaviour of MRF accompanied with CBF and MBF systems
- S-ST-195 Experimental investigation on pre-stressed polypropylene-band
- S-ST-264 The strength of mini shell structure made from ultra high performance polypropylene fiber reinforced concrete (UHPPFRC)

Structural Timber and Bamboo Engineering

- S-TB-62 Shear modulus prediction of three-ply cross-laminated kapur wood beams from shear moduli of individual laminae
- S-TB-172 Bending capacity of non-prismatic LVL *paraserianthes falcataria* beams
- S-TB-175 Bolt spacing and end distance of bolted connection of LVL *paraserianthes falcataria*
- S-TB-202 Influence of bolt tightening's force to the strength of connection system of bamboo truss structure with wooden clamp

Transportation Sustainable Pavement Material

- T-SP-50 Comparison of the displacement and strain values of rigid pavement between model laboratory-test result and EverStressFE software analysis
- T-SP-60 An analysis and empirical correlation of dynamic and resilient modulus test results for asphaltic concrete mixtures
- T-SP-104 The use of crumb rubber additive in asphalt concrete mix design
- T-SP-116 The effect of latex on permanent deformation of asphalt concrete wearing course
- T-SP-178 Characterizing cracking and permanent deformation; an attempt for predicting the end of the structural pavement life
- T-SP-179 Evaluation of proposed backcalculation procedure in Indonesia Overlay Design Guide
- T-SP-186 Design and properties of renewable bioasphalt for flexible pavement
- T-SP-207 Marshall characteristics in asphalt concrete-wearing course (AC-WC) in various length and temperature submersion
- T-SP-234 The application of porous concrete filled with soil and sand for low volume traffic road
- T-SP-239 The evaluation of functional performance of national roadway using three types of pavement assessments methods

Transportation Traffic Engineering

- T-TE-46 Fairway traffic capacity in Indonesia
- T-TE-187 Effect of students' car access and car use habit on student behavior to reduce using cars for traveling to campus
- T-TE-255 The application of road lighting standard towards sustainable transportation in large cities in Indonesia
- T-TE-258 Analysis of demand responsive Pelican crossing in mixed traffic conditions

Water Resources Engineering

- W-RE-94 Disaster management: selections of evacuation routes due to flood disaster
- W-RE-115 The initial step for developing sustainable urban drainage system in Semarang, Indonesia
- W-RE-149 Proposed Method to determine the Potential Location of Hydropower Plant: Application at Rawatamtu Watershed, East Java
- W-RE-235 River performance assessment model
- W-RE-262 Priority analysis of small dams construction using cluster analysis, AHP and weighted average method (case study: small dams in Semarang district)

Public Works Research & Technology (PUPR)

- PUPR-01 Post-Tsunami Coastal Structures Performances Around Meulaboh City, Indonesia
- PUPR-02 Applications of Condition Index of Buildings (Case Study Sragen Technopark Building)
- PUPR-03 Damage Analysis for Coastal Protection Structure at Batu Berhanti Island (the Outer Islands) in Batam
- PUPR-04 Analysis of Causes of Termination of Contract in Construction Works in North Sumatera Province in Indonesia
- PUPR-05 Bridge Maintenance Priority Based On Load Rating Factor Criteria: A Study Case
- PUPR-06 The Leadership Assessment Study on the Level of Road Technical Personnel Competence at Dinas Prasarana Jalan Tata Ruang dan Permukiman, Province of West Sumatera Using Requirement-Satisfaction Analysis
- PUPR-07 Vehicle Overloading Impacts Against Overlay Thickness and Remaining Life of Flexible Pavement (Case Study: National Road in West Sumatera)
- PUPR-08 Study of Process of the Project Procurement for Road and Bridge Using E-Procurement Based on Presidential Regulation No. 04 Year 2015
- PUPR-09 Spatial Optimization Model for Raw Water Supply Allocation (Case Study in Jabodetabek)
- PUPR-10 Hydraulic characteristics analysis on cipanas dam spillway
- PUPR-11 Study of the Requirement and availability of water in cultivation areas based on the urban planning of the Bener Meriah District 2012-2032
- PUPR-12 The Analysis of Channel Type Combination Alternative of "Klambu Kudu" Raw Water Channel
- PUPR-13 Monitoring System of River Morphological Changes for Supporting River Structures Maintenance
- PUPR-14 Trade-off Analysis on Reservoir Operation for Flood-Control and Benefit from Raw Water and Hydropower (Case Study in Jatibarang Reservoir)
- PUPR-15 Estimation of Road Network Performance of Surakarta City

CONFERENCE HIGHLIGHTS

WELCOME DINNER



for full participants, the SCESCM committee is organizing a welcome dinner for conference participants on September 5th, 2016. The dinner will be taking place at Denpasar room, Sanur Paradise Plaza Hotel, Sanur, Bali. The dinner will be held from 6PM. During the program, participants will enjoy traditional gamelan music and traditional dances from Bali.

Welcome Dinner Program

Time	Description
18:00 - 18:15	Welcoming by MC
18:15 - 18:30	Pendet Dance
18:30 - 18:45	Opening speech
18:45 - 19:05	Announcement Best Paper Awards
19:05 - 20:30	Dinner
	During dinner, participant will be entertained by Kupu-Kupu Tarum Dance, Oleg Tambulilingan Dance and Joget Dance.
20:30	Closing

SOCIAL PROGRAM

The SCESCM 2016 offers The Social Program for participants who come with their spouse or family members. The spouse or family members of a SCESCM participant can enjoy traditional and modern market as well as a beach on the first and the second day of the conference. In this program, the committee provides free transportation and tour guide only. Meals and entrance fee (if any) are not accommodated by the committee. The family member of participant who would like to join this program can directly register at the front desk.

Destination:

First day (5 September 2016):

1. Sukawati traditional market in Bali. It is the biggest traditional market in Bali to purchase handicrafts and traditional handmade products.
2. Ubud art market. It is also the traditional art market. The visitors can discover many attractively designed handicraft.
3. Kamasan, Klungkung village. The visitors can enjoy the traditional village on Bali, Indonesia.

Second day (6 September 2016):

1. Joger. It is a Balinese souvenir shop in Kuta area. The visitors will get a variety of T-shirts with unique and interesting design.
2. Krisna Tuban center gift shop.
3. Pandawa beach. It is one of Bali's gorgeous beaches, located on Bali's southern Bukit Peninsula.

GENERAL INFORMATION

TAXI/CAB

Airport Taxi

Telephone : 0361 751011

Bali Taxi

Telephone : 0361 701111

Blue Bird Taxi

Telephone : 0361 701111

Komotra Taxi

Telephone : 0361 759102

Ngurah Rai Taxi

Telephone : 0361 759102

Wahana Taxi

Telephone : 0361 241444

HOSPITAL

Sanglah Hospital

Telephone : 0361 227911

Bhakti Rahayu Hospital

Telephone : 0361 430245

Dharma Usadha Hospital

Telephone : 0361 227560

Sanjiwani Gianyar Hospital

Telephone : 0361 943020

Dharma Yadnya Hospital

Telephone : 0361 462488

Dharma Kerti Hospital

Telephone : 0361 811424

DAILY EXPRESSION

Selamat Pagi

Good Morning.

Selamat Siang

Good Afternoon.

Selamat Malam

Good Evening.

Apa Kabar?

How Are You?

Maaf mengganggu, bisa minta bantuannya?

Excuse me, may I ask for your help?

Siapa Nama Anda?

What is Your Name?

Dimana.....?

Where is.....?

SANUR PARADISE PLAZA HOTEL PLAN

SANUR PARADISE PLAZA HOTEL PLAN



