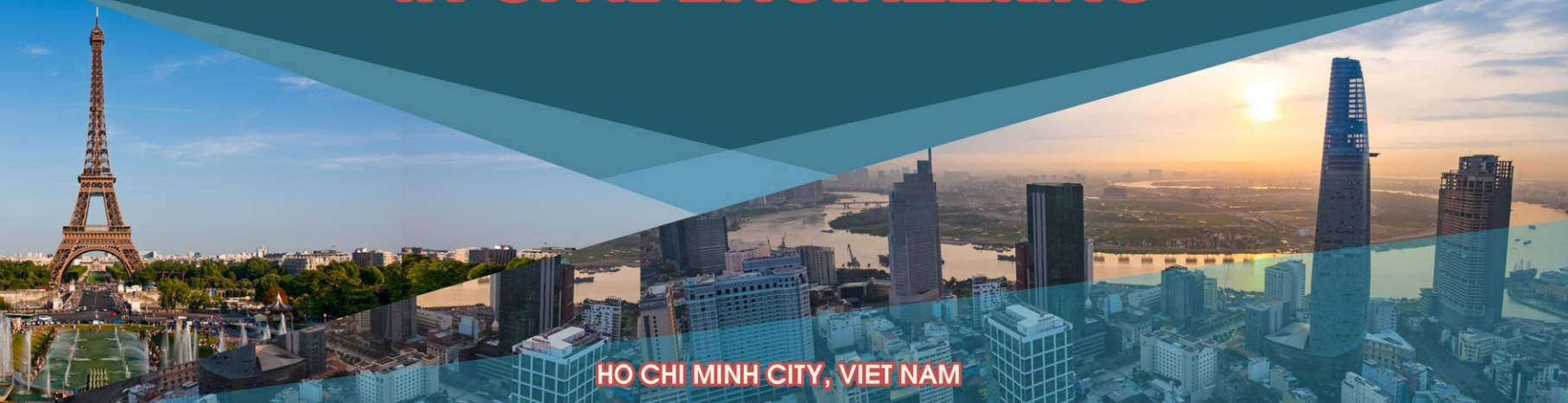


INTERNATIONAL CONFERENCE

CIGOS VIETNAM 2017

(October 26th& 27th, 2017)

NEW CHALLENGES IN CIVIL ENGINEERING



HO CHI MINH CITY, VIET NAM

CONFERENCE'S ORGANIZERS

The École Spéciale des Travaux Publics (ESTP) is one of the French “Grandes Écoles”, which are the leading institutions for French engineering and management education. The ESTP Paris is the French institution that trains the largest number of students for the construction industry in all fields: design, construction, planning & development, project & facilities management, sustainable buildings & infrastructures, rehabilitation, maintenance, new materials and energy efficiency.

<http://www.estp.fr>



Ho Chi Minh City University of Technology (HCMUT) was established in 1957 and has been recognized as a centre of excellence among technological universities in Vietnam. Prior to the country reunification in 1975, the university was the only institution to produce engineers in the Southern Vietnam. Up to the present day, HCMUT still remains as the largest, the most prestigious and the oldest engineering university in the South of Vietnam.

<http://www.hcmut.edu.vn>



CONFERENCE'S ORGANIZERS

The Association of Civil Engineering, Mechanics and Materials (GCMM) is an association of scientific and technical nature. Its objective is to create a place of encounter and exchange between its members, to promote the image of the Vietnamese community in the fields of Civil, Mechanical and Materials Engineering, and to contribute to Vietnam's development and bilateral relationship between France and Vietnam. <http://www.gcomm.fr>



The Association of Vietnamese Scientists and Experts (AVSE) is founded in May 2011. It aims at providing a forum for scientists and experts to exchange ideas and discuss the future of their professions, as well as at contributing actively to the development of Vietnam. <http://www.a-vse.org>



The École Normale Supérieure Paris-Saclay (ENS Paris-Saclay) is a prestigious public institution of higher education and research founded in 1912. With its multidisciplinary departments and their associated research laboratories, the ENS Paris-Saclay provides its students with a high-level cultural and scientific training. <http://www.ens-cachan.fr>



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A WELCOME FROM THE CONFERENCE CHAIR

We would like to extend our warm welcome to all participants of CIGOS 2017 conference in Vietnam. This edition is held in one of the most privileged universities in Vietnam, which embraces the typical spirit of universities with a long history. As with the previous three editions of CIGOS, the conference focuses on “New challenges in Civil Engineering”. There were 114 high-quality papers chosen among 189 abstracts submitted, they were divided into the following sub-themes:

1. Advanced modelling of structure
2. Materials for construction
3. Geotechnics for environment and energy
4. Innovative design and methods
5. Water treatment and environment
6. Case studies (Tunnel, Nuclear Power Plant, etc.)

Proceedings of CIGOS 2017 was printed by Springer in the volume 8, 2017 of lecture notes in Civil Engineering. These papers are presented on the 26-27th of October with 6 plenary sessions at the HCMUT campus. In addition, a technical tour is organized on the afternoon of 25th October 2017 at the subway line No.1 project constructed by Shimizu Corporation. We hope you will have realistic perspective of one of the biggest projects with advanced technology in Vietnam. Many specialties of Vietnamese cuisine will be served to you during breakfast, lunch, and tea breaks. Especially, a gala dinner on Elisa floating restaurant will celebrate the success of CIGOS Vietnam 2017 on the night of the 26th.

We would like to express our deepest gratitude to all the supports and contributions from our sponsors, speakers, participants, as well as members of scientific and organizing committees. We wish you a successful conference and fruitful discussion.

By the editors of the CIGOS Vietnam 2017.

Cuong Ha-Minh, Thanh Phong Mai, Guillaume Hervé-Secourgeon, Frederic Ragueneau

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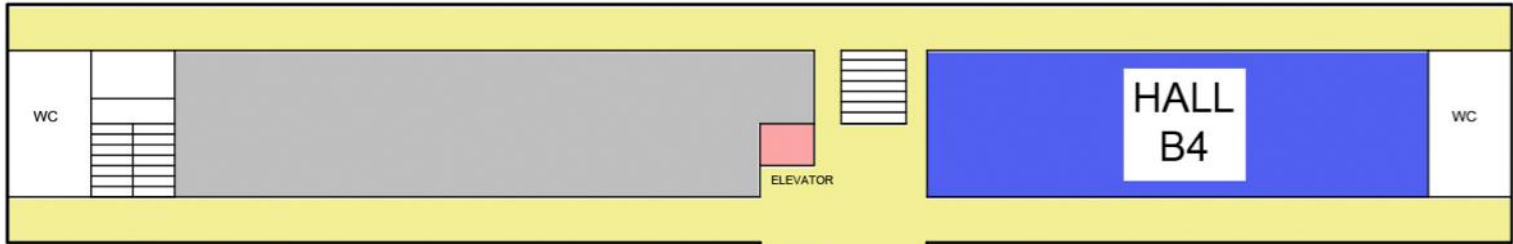
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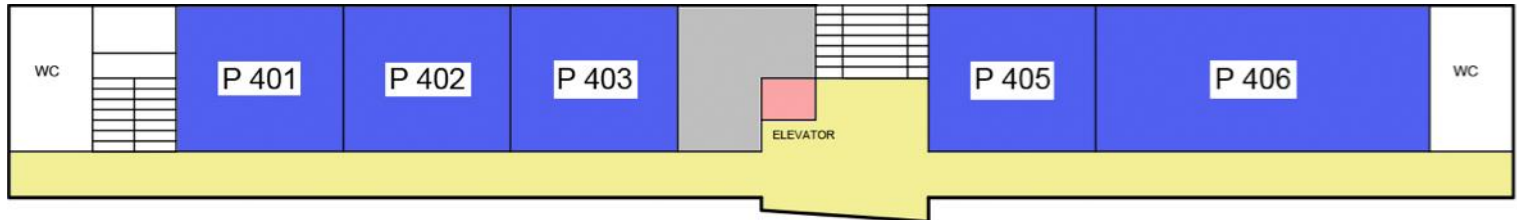
GENERAL INFORMATION



GENERAL INFORMATION



FLOOR 01



FLOOR 04

Chief of Staff: Dr. Thi Ngoc HUYNH - +84941.701.487

PROGRAM OVERVIEW

WEDNESDAY, 25th OCTOBER 2017

14:00 – 15:00	Registration (B6 Lobby)
15:00 – 17:00	Technical visit on a construction site (Shimizu)

THURSDAY, 26th OCTOBER 2017

07:30 – 08:30	Registration (B4 Lobby) and Breakfast (B4 Canteen)
08:30 – 09:00	Opening Ceremony (Hall B4, Building B4)
09:00 – 09:45	<p>Plenary Session 1 (Hall B4, Building B4) (Chair: Assoc. Prof. Hoang-Hung Tran-Nguyen, HCMUT, Vietnam) <i>A review of recycled aggregates (RAP and RCA) as unbound base course material for sustainable highway construction</i></p> <p>Tuncer B. Edil, Professor Emeritus and Director, Recycled Materials Resource Center, Department of Civil and Environmental Engineering, University of Wisconsin-Madison, USA</p>
09:45 – 10:15	Coffee Break (B4 Lobby)

PROGRAM OVERVIEW

THURSDAY, 26th OCTOBER 2017

10:15 – 11:45	Technical Sessions (Rooms P401, P402, P403, Building B4)		
3x6 presentations 15'/presentation	Advanced Modelling of Structures 1 (AMS1) Room P 401 Chairs: Carlo Sansour and Emmanuel Ferrier	Materials For Construction 1 (MFC1) Room P 402 Chairs: Christophe Lanos and Quoc Bao Bui	Geotechnics for Environment and Energy 1 (GEE1) Room P 403 Chairs: Anh-Minh Tang and M. Kitazume
11:45 – 13:00	Lunch (B4 Canteen)		
13:00 – 13:45	Plenary Session 2 (Hall B6, Building B6) (Chair: Prof. Henry Wong, ENTPE, France) <i>Coastal erosion in Vietnam - Problems and Solutions</i> Hitoshi Tanaka, Tohoku University, Japan		
13:45 – 15:15	Technical Sessions (Rooms P401, P402, P403, Building B4)		
3x6 presentations 15'/presentation	Materials For Construction 2 (MFC2) Room P 401 Chairs: Mohamed ElGawady – Khanh Son Nguyen	Geotechnics for Environment and Energy 2 (GEE2) Room P 402 Chairs: Tuncer B. Edil and Hoang-Hung Tran-Nguyen	Water Treatment and Environment 1 (WTE1) Room P 403 Chairs: Henri Bertin and Rémy Gourdon

PROGRAM OVERVIEW

THURSDAY, 26th OCTOBER 2017

15:15 – 15:45	Coffee Break (B6 Lobby)		
15:45 – 16:30	Plenary Session 3 (Hall B6, Building B6) (Chair: Prof. Gregory J Hancock, University of Sydney, Australia) <i>New generation of Nuclear Power Plants</i> Guillaume Hervé-Secourgeon (ESTP Paris/ EDF Saclay France)		
16:30 – 18:00	Technical Sessions (Rooms P 401, P 402, P 403, Building B4)		
3x6 presentations 15'/presentation	Advanced Modelling of Structures 2 (AMS2) Room P 401 Chairs: Toshimi Kabeyasawa & Cao Hung Pham	Materials For Construction 3 (MFC3) Room P 402 Chairs: Xuan Hong Vu & and Martin Cyr	Innovative Design and Methods 1 (IDM1) Room P 403 Chairs: Giang Nguyen & Jose Turmo
19:00 – 22:00	Gala Diner		

PROGRAM OVERVIEW

FRIDAY, 27th OCTOBER 2017

07:00 – 07:45	Registration (B4 Lobby) and Breakfast (B4 Canteen)		
07:45 – 08:30	<p>Plenary Session 4 (Hall B4, Building B4) (Chair: Guillaume Herve-Secourgeon, ESTP, France) <i>From 3-D to 1-D generalised and Cosserat for structural dynamics, fibre reinforced materials and coupled systems</i></p> <p>Carlo Sansour, Faculty of Engineering, Civil Engineering department, University of Nottingham, UK; Civil Engineering Department, INSA de Rennes, France</p>		
08:30 – 10:00	Technical Sessions (Rooms P 401, P 402, P 403, Building B4)		
3x6 presentations 15'/presentation	<p>Materials For Construction 4 (MFC4) Room P 401 Chairs: Pierre Rossi and Van Mien Tran</p>	<p>Geotechnics for Environment and Energy 3 (GEE3) Room P 402 Chairs: Henry Wong & Khoa Huynh</p>	<p>Case Studies (CS) Room P 403 Chairs: Guillaume Herve-Secourgeon & Quoc Bao Bui</p>
10:00 – 10:30	Coffee Break (4 th Floor, B4 Lobby)		

PROGRAM OVERVIEW

FRIDAY, 27th OCTOBER 2017

10:30 – 12:00	Technical Sessions (Rooms P 401, P 402, P 403, Building B4)		
3x6 presentations 15'/presentation	Advanced Modelling of Structures 3 (AMS3) Room P 401 Chairs: Alexis Beakou and The Truyen Tran	Water Treatment and Environment (WTE2) Room P 402 Chairs: Jean-Luc Bertrand-Krajewski and Tan Phong Nguyen	Innovative Design and Methods 2 (IDM2) Room P 403 Chairs: Quoc Hung Ung and Christophe Rouzaud
12:00 – 13:00	Lunch (B4 Canteen)		
13:00 – 13:45	Plenary Session 5 (Hall B4, Building B4) (Chair: Asst. Prof. Cuong Ha-Minh, ENS Paris-Saclay & AVSE, France) <i>Effective Slab Width For Evaluating Ultimate Seismic Capacities Of Reinforced Concrete Buildings</i> Toshimi Kabeyasawa, Toshikazu Kabeyasawa		
13:45 – 15:15	Technical Sessions (Rooms P 401, P 402, P 403, Building B4)		
3x6 presentations 15'/presentation	Advanced Modelling of Structures 4 (AMS4) Room P 401 Chairs: Alexis Beakou and The Truyen Tran	Innovative Design and Methods 3 (IDM3) Room P 402 Chairs: Christophe Rouzaud and Quang Huy Nguyen	Materials for Construction 5 (MFC5) Room P 403 Chairs: Xuan Hong Vu and Tuncer B. Edil

PROGRAM OVERVIEW

FRIDAY, 27th OCTOBER 2017

15:15 – 15:45	Coffee Break (4 th Floor, B4 Lobby)
15:45 – 16:30	<p>Plenary Session 6 (Hall B4, Building B4) (Chair: Prof. Anh-Minh Tang, École Nationale des Ponts et Chaussées & AVSE, France) <i>Recent developments in design for structural stability</i> Gregory J Hancock, Emeritus Professor and Professorial Research Fellow, University of Sydney, Australia</p>
16:30 – 16:45	Closing remarks

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Plenary Sessions	
Time	Content (Title)
09:00 – 09:45	<p style="text-align: center;">Plenary Session 1 (Chair: Assoc. Prof. Hoang-Hung Tran-Nguyen, HCMUT, Vietnam) <i>A review of recycled aggregates (RAP And RCA) as unbound base course material for sustainable highway construction</i> Tuncer B. Edil, Professor Emeritus and Director, Recycled Materials Resource Center, Department of Civil and Environmental Engineering, University of Wisconsin-Madison, USA</p>
13:00 – 13:45	<p style="text-align: center;">Plenary Session 2 (Chair: Prof. Henry Wong, École Nationale des Travaux Publics de l'État, France) <i>Coastal erosion in Vietnam - Problems and Solutions</i> Hitoshi Tanaka, Tohoku University, Japan</p>
15:45 – 16:30	<p style="text-align: center;">Plenary Session 3 (Chair: Prof. Gregory J Hancock, University of Sydney, Australia) <i>New generation of nuclear power plants</i> Guillaume Herve-Secourgeon, Ecole Spéciale des Travaux Publics, France</p>

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session AMS1: Metal structure (10:15 – 11:45) (Chairs: Carlo Sansour and Emmanuel Ferrier)	
Time	Content (Title)
10:15 – 10:30	<i>Application of a newly puzzel shaped crestbond rib shear connector in composite beam using opposite T steel girder: An experimental study.</i> Duy Kien Dao (Pusan National University, Korea), Duc Vinh Bui, Thi Hai Vinh Chu, Van Phuoc Nhan Le
10:30 – 10:45	<i>Bolt-loosening detection in steel column connections using impedance responses.</i> Duc-Duy Ho, Trung-Hieu Nguyen (Ho Chi Minh city University of Transport, Ho Chi Minh city, Vietnam), Quang-Huy Le
10:45 – 11:00	<i>Failure analysis of a cold-rolled steel tensile specimen using a damage-plasticity model.</i> Bac V. Mai (The University of Sydney, Australia), Giang D. Nguyen, Cao Hung Pham, Gregory J. Hancock
11:00 – 11:15	<i>Fuzzy linear elastic dynamic analysis of 2 – dimensional semi - rigid steel frames with fuzzy fixity factors.</i> Thanh Viet Tran (Duy Tan University, Vietnam), Quoc Anh Vu, Xuan Huynh Le
11:15 – 11:30	<i>Incorporation of measured geometric imperfections into finite element models for cold-rolled aluminium sections.</i> Ngoc Hieu Pham (The University of Sydney, Australia), Cao Hung Pham, Kim J.R. Rasmussen
11:30 – 11:45	<i>Experimental study of hybrid walls with several fully encased steel sections.</i> Van Toan Tran (Thuy Loi University, Vietnam), Quang Huy Nguyen

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session MFC1: Reinforced materials (10:15 – 11:45) (Chairs: Christophe Lanos and Quoc Bao Bui)	
Time	Content (Title)
10:15 – 10:30	<i>Experimental approach to identify the thermomechanical behaviour of a textile reinforced concrete (TRC) subjected to high temperature and mechanical loading.</i> Tala Tlajji, <u>Xuan Hong Vu</u> (Université de Lyon, Université Claude Bernard - Lyon I), Emmanuel Ferrier , Amir Si Larbi
10:30 – 10:45	<i>Additional carbon dependent electrical resistivity behaviors of high performance fiber-reinforced cementitious composites.</i> Duy-Liem Nguyen (Ho Chi Minh City University of Technology and Education, Ho Chi Minh City, Vietnam), Thi-Ngoc-Han Vuong , Tri-Thong Nguyen
10:45 – 11:00	<i>Analysis behavior of reinforcement in a reinforced concrete beam using steel slag replacing crushed-stone aggregate.</i> Anh-Thang Le (Ho Chi Minh City University of Technology and Education), Trong-Quang Hoang , Tat-Thanh Nguyen
11:00 – 11:15	<i>Experimental study on the thermo-mechanical behavior of hand-made carbon fiber reinforced polymer (H-CFRP) simultaneously subjected to elevated temperature and mechanical loading.</i> Phi Long Nguyen (Université Claude Bernard - Lyon I, France), Xuan Hong Vu , Emmanuel Ferrier
11:15 – 11:30	<i>Hygrothermal properties of bio-insulation building materials based on bamboo fibers and bio-glues.</i> Dang Mao Nguyen (Université de Savoie Mont Blanc, France), Anne-Cécile.Grillet , Thi Vi Vi Do , Thi My Hanh Diep , Chi Nhan Ha Thuc , Monika Woloszyn
11:30 – 11:45	<i>Study on effect of cornsilk fiber in cemented soil stabilization.</i> Khiem Quang Tran (Tohoku University, Japan), Tomoaki Satomi , Hiroshi Takahashi

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session GEE1: Modelling (10:15 – 11:45) (Chairs: Anh-Minh Tang and M. Kitazume)	
Time	Content (Title)
10:15 – 10:30	<i>A constitutive model for soil exhibits particle crushing.</i> <u>Vu P. Q. Nguyen</u> (Yokohama National University, Japan), Mamoru Kikumoto
10:30 – 10:45	<i>Application of a cyclic accumulation model UDCAM to FE analyses of offshore foundations.</i> <u>Dat Vu Khoa Huynh</u> (Norwegian Geotechnical Institute, Norway), Hans Petter Jostad
10:45 – 11:00	<i>Influence of microcracking of host rock on the hydromechanical responses of underground structures: constitutive modeling and numerical simulations.</i> T.A. Bui, <u>H. Wong</u> (École Nationale des Travaux Publics de l'État, France), F. Deleruyelle
11:00 – 11:15	<i>Rigid retaining walls interacting with unsaturated soils in axial symmetry.</i> <u>Thanh Vo</u> (The University of New South Wales, Australia), Adrian Russell
11:15 – 11:30	<i>Effects of pore-water chemistry on the behaviour of unsaturated clays.</i> X. Lei , <u>H. Wong</u> (École Nationale des Travaux Publics de l'État, France), A. Fabbri , A. Limam , Y.M. Cheng
11:30 – 11:45	<i>Effect of site parameters on dynamic impedance of bridge piles subjected to seismic loading.</i> <u>Muhammad Tariq A. Chaudhary</u> (Kuwait University, Kuwait)

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session MFC2: Treated materials (13:45 – 15:15) (Chairs: Mohamed ElGawady and Khanh Son Nguyen)	
Time	Content (Title)
13:45 – 14:00	<i>An experimental study on earthen materials stabilized by geopolymer.</i> <u>Q-B Bui</u> (Ton Duc Thang University, Vietnam), Prudhomm E, Grillet A-C, Prime N
14:00 – 14:15	<i>Using wastes from thermal power plants for manufacturing of low strength construction materials.</i> <u>Quoc-Bao Bui</u> (Ton Duc Thang University, Vietnam), Minh-Tung Tran, Duc-Hien Le
14:15 – 14:30	<i>Using a spray test to study the surface erosion of geomaterials. Application on construction material of soil-cement mixtures in Le Havre, France.</i> <u>Van-Nghia Nguyen</u> (Thuy Loi University, Vietnam), Said Taibi
14:30 – 14:45	<i>Study on strength of modified sludge produced by fiber-cement stabilized soil method using several kinds of fiber materials.</i> <u>Thanh Nga Duong</u> (Tohoku University, Japan), Tomoaki Satomi, Hiroshi Takahashi
14:45 – 15:00	<i>Development of geopolymer-based materials from coal bottom ash and rice husk ash with sodium silicate solutions.</i> <u>Hoc Thang Nguyen</u> (Ho Chi Minh City University of Food Industry, Vietnam), Trung Kien Pham, Michael A.B. Promentilla
15:00 – 15:15	<i>Soil stabilization by using alkaline-activated ground bottom ash coupled with red mud.</i> <u>My Quoc Dang</u> (Nha Trang University, Vietnam), Young-sang Kim, Tan Manh Do

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session GEE2: Experimental methods (13:45 – 15:20) (Chairs: Tuncer B. Edil and Hoang-Hung Tran-Nguyen)	
Time	Content (Title)
13:45 – 14:05	<i>Pneumatic flow mixing method for beneficial use of dredged soil</i> (Keynote Paper). <u>M.Kitazume</u> (Tokyo Institute of Technology, Japan)
14:05 – 14:20	<i>Assessment of multiple geophysical techniques for the characterization of municipal waste deposit sites</i> . Gael Dumont, Tanguy Robert, Nicolas Mark, <u>Frédéric Nguyen</u> (Universite de Liege, Belgium)
14:20 – 14:35	<i>Development of new type of screwed pile with large bearing capacity and ecological driving method "Tsubasa PileTM"</i> . <u>Marina Kawai</u> (JFE Steel Corporation, Japan), Kazuomi Ichikawa, Kenji Kono
14:35 – 14:50	<i>Laboratory study of local clay-pile friction evolution for large numbers of cycles</i> . <u>Rawaz Dlawar Muhammed</u> (Université Paris-Est, France), Jean Canou, Jean-Claude Dupla, Alain Tabbagh
14:50 – 15:05	<i>3D electrical resistivity tomography of karstified formations using cross-line measurements</i> . Van horde Maurits, Hermans Thomas, Dumont Gael, <u>Nguyen Frédéric</u> (Universite de Liege, Belgium)
15:05 – 15:20	<i>Seismic cone testing using seafloor drill technology</i> . <u>D.H Doan</u> (Fugro, France), P. Looijen, A.G. Cooper

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session WTE1: Water treatment (13:45 – 15:15) (Chairs: Henri Bertin and Rémy Gourdon)	
Time	Content (Title)
13:45 – 14:00	<i>Treatment of domestic wastewater from small cities on vertical flow constructed wetlands (VFCWs).</i> R. Gourdon (Institut National des Sciences Appliquées Lyon, France), M. Kania , M. Gautier , B. Kim , P. Michel
14:00 – 14:15	<i>Optimization of decolorization and COD removal from textile wastewater using electro fenton process.</i> Duc Dat Duc Nguyen (Bach Khoa University, Vietnam), Thi Thuy Nguyen , Tan Phong Nguyen
14:15 – 14:30	<i>Parameter study on remediating Cr (VI) in water using activated charcoal.</i> Alfa-Sika Mande Seyf-Laye (China University of Geosciences, China), Tchakala Ibrahim , Djaneye-Boundjou Gbandi , Chen Honghan
14:30 – 14:45	<i>Treatment of slaughterhouse wastewater by intermittent cycle extended aeration system (ICEAS).</i> Duc Tiep Nguyen , Tan Phong Nguyen (Ho Chi Minh City University of Technology, Vietnam)
14:45 – 15:00	<i>Urban stormwater management by green infrastructure: Design and comparison of three scenarios.</i> Jean-Luc Bertrand-Krajewski (Institut National des Sciences Appliquées Lyon, France), Pauline Herrero

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session AMS2: Composite structure (16:30 – 18:00) (Chairs: Toshimi Kabeyasawa and Cao Hung Pham)	
Time	Content (Title)
16:30 – 16:45	<i>A numerical modeling of rc beam-column joints compared to experimental results.</i> Q.-B. Bui (Ton Duc Thang University, Vietnam), B. Sentosa, T.-H. Duong
16:45 – 17:00	<i>Redistribution of moment at beam-column joints in rc structures: comparison between an experimental study and eurocode 2.</i> Q.-B. Bui (Ton Duc Thang University, Vietnam), J.-P. Plassiard, O. Plé, P. Perrotin, H. Purnomo
17:00 – 17:15	<i>Bending resistance of steel-bar reinforced concrete beam with extreme compression zones using high-performance composite.</i> Duy-Liem Nguyen (Ho Chi Minh City University of Technology and Education, Ho Chi Minh City, Vietnam), Duy-Ngo Tong
17:15 – 17:30	<i>Strength capacity of steel piles filled with concrete at pile top.</i> Moeko Matoba, Mutsuki Sato (Tohoku University, Japan), Toshiharu Hirose, Yoshihiro Kimura
17:30 – 17:45	<i>Shear behavior of high performance concrete beams using digital image correlation technique.</i> Touhami Tahenni (University Djilali Bounaama Khemis Miliana, Algeria), Mohamed Chemrouk, Thibaut Lecompte

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session MFC3: Pavement materials (16:30 – 18:00) (Chairs: Tuncer B. Edil and Martin Cyr)	
Time	Content (Title)
16:30 – 16:45	<i>Correlation between resilient modulus and permanent deformation during a large scale model experiment of unbound base course.</i> <u>Makhaly Ba</u> (University of Thies, Senegal)
16:45 – 17:00	<i>Crumb rubber as a sustainable aggregate in chip seal pavement.</i> Ahmed A. Gheni, <u>Mohamed A. ElGawady</u> (Missouri University of Science and Technology, USA)
17:00– 17:15	<i>Semi-flexible material: The sustainable alternative for the use of conventional road materials in heavy-duty pavement.</i> <u>T. Nhan Tran</u> (BMT Construction and Investment JSC, Vietnam), H. T. Tai Nguyen, K. Son Nguyen, N. T. Huynh Nguyen
17:15– 17:30	<i>The flow response of reinforced earth structures utilized fine-grained poorly draining materials as backfill.</i> <u>D. Van Bui</u> (Hanoi University of Mining and Geology, Vietnam), A. Chinkulkijniwat, S. Horpibulsuk, S. Yubonchit, A. Udomchai, I. Limrat, A. Tuan Le, H. Tien Pham
17:30 – 17:45	<i>Effective design of flexible pavement on treated expansive soil.</i> Raju Sarkar (Royal University of Bhutan, Bhutan), Ankur Mudgal, Ritesh Kurar, Varun Gupta

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE FIRST DAY (26 October 2017)

Technical Session IDM1 (16:30 – 18:00) (Chairs: Giang Nguyen and Jose Turmo)	
Time	Content (Title)
16:30 – 16:45	<i>Civil engineering design of Sevrans-Beaudottes station by using a 3 dimensional soil-structure interaction modeling.</i> Reza Taherzadeh, Imre Miszlay, Samy Mahdi, <u>Tien Long Nguyen</u> (Tractebel, France)
16:45 – 17:00	<i>Image processing in the characterization of crack propagation in cold-formed steel samples.</i> Daniel Dias-da-Costa, <u>Cao Hung Pham</u> (The University of Sydney, Australia), Gregory J. Hancock
17:00 – 17:15	<i>Unibridge®: A new concept in prefabricated modular bridge.</i> N. Matiere, <u>Q.H. Ung</u> (Matiere SAS, France), P.A. Nicolaudie
17:15 – 17:30	<i>Achieving robustness of structures is key to resilience.</i> <u>Paul Smith</u> (Arup, UK)
17:30 – 17:45	<i>Influence of boundary conditions on the behavior of infilled frames.</i> <u>Quoc Khanh Le Dinh</u> (Ho Chi Minh City University of Technology, Vietnam), Thanh Cong Bui
17:45 – 18:00	<i>Numerical modelling of desiccation cracking of clayey soil by using cohesive fracture method.</i> Thi Dong Vo, Amade Pouya, <u>Sahar Hemmati</u> (École des Ponts ParisTech, France), Anh Minh Tang

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Plenary Sessions	
Time	Content (Title)
07:45 – 08:30	<p style="text-align: center;">Plenary Session 4 (Chair: Prof. Guillaume Herve-Secourgeon, ESTP, France) <i>From 3-D to 1-D generalised and cosserat for structural dynamics, fibre reinforced materials and coupled systems</i></p> <p style="text-align: center;">Carlo Sansour, Faculty of Engineering, Civil Engineering department, University of Nottingham, UK; Civil Engineering Department, INSA de Rennes, France</p>
13:00 – 13:45	<p style="text-align: center;">Plenary Session 5 (Chair: Asst. Prof. Cuong Ha-Minh, ENS Paris-Saclay & AVSE, France) <i>Effective Slab Width For Evaluating Ultimate Seismic Capacities Of Reinforced Concrete Buildings</i></p> <p style="text-align: center;">Toshimi Kabeyasawa, Toshikazu Kabeyasawa</p>
15:45 – 16:30	<p style="text-align: center;">Plenary Session 6 (Chair: Prof. Anh-Minh Tang, Ecole Nationale des Ponts et Chaussées & AVSE, France) <i>Recent developments in design for structural stability</i></p> <p style="text-align: center;">Gregory J.Hancock, Emeritus Professor and Professorial Research Fellow, University of Sydney, Australia</p>

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session MFC4: Concrete (8:30 – 10:00)

(Chairs: **Pierre Rossi** and **Van Mien Tran**)

Time	Content (Title)
08:30 – 08:45	<i>Application of empirical models to optimizing concrete pumpability.</i> Tien-Tung Ngo (University of Cergy Pontoise, France), <u>Chanh-Trung Mai</u> (The University of Da Nang, Vietnam), El-Hadj Kadri, Abdelhak Kaci
08:45 – 09:00	<i>Behavior of concrete-filled hybrid large rupture strain FRP tubes under cyclic axial compression.</i> Monika Nain, Mohanad M. Abdulazeez, <u>Mohamed A. ElGawady</u> (Missouri University of Science and Technology, USA)
09:00 – 09:15	<i>Chemical shrinkage characteristics of binder pastes in ultra high performance concrete made from different types of cement.</i> <u>Quoc Si Bach</u> (University of Danang, Vietnam)
09:15 – 09:30	<i>Chloride binding ability and anti-corrosion properties of supersulfated cement in seawater/sand mixing concrete.</i> <u>Khanh Son Nguyen</u> (Ho Chi Minh city University of Technology, Vietnam), Phung Anh Toan Nguyen, Hong Thai Le, Thanh Tri Ho, Ngoc Tri Huynh Nguyen, Yap Soon Poh, Nobuhiro Chijiwa, Nobuaki Otsuki
09:30 – 09:45	<i>Effect of pre-compressive stress on chloride permeability of concrete used anti-permeable admixture.</i> <u>The Truyen Tran</u> (University of Transport and Communication, Vietnam), Xuan Tung Nguyen, Xuan Ba Ho
09:45 – 10:00	<i>Numerical tool for the evaluation of the hygrothermal performance of a hemp-lime concrete.</i> S. Moissette, M. Bart, Y. Aït Oumeziane, <u>C. Lanos</u> (Universite de Rennes 1, France), F. Collet, S. Prétot

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session GEE3: Case studies (8:30 – 10:00) (Chairs: Henry Wong and Khoa Huynh)	
Time	Content (Title)
08:30 – 08:45	<i>A case study of a long-duration thermal response test in borehole heat exchangers.</i> Georgia Radioti, Benjamin Cerfontaine, Robert Charlier, <u>Frederic Nguyen</u> (University of Liege, Belgium)
08:45 – 09:00	<i>Effects of operating parameters of the NSV system on field soilcrete characteristics in the Mekong Delta, Vietnam.</i> Hoang-Hung Tran-Nguyen, <u>Chau Dac Truong</u> (Ho Chi Minh City University Technology, Vietnam), Khang Thien Truong
09:00 – 09:15	<i>Jet grouting mitigating settlement of bridge approaching embankments of Tam Bang and Vam Dinh bridges.</i> Hoang-Hung Tran-Nguyen, <u>Chuong Hong Quach</u> (Ho Chi Minh City University of Technology, Vietnam)
09:15 – 09:30	<i>Sanding onset for offshore depleted using critical drawdown pressure: a case study for Well X Cuulong Basin in Vietnam.</i> Tu An Bui, <u>Van Hung Nguyen</u> (Petrovietnam University, Vietnam), Tien Trung Duong, Hai Linh Luong, Huu Truong Nguyen, Truong Minh Hoang
09:30 – 09:45	<i>Thermal conductivity of controlled low strength material (CLSM) made with excavated soil and coal ash.</i> <u>Tan Manh Do</u> (Chonnam National University, South Korea), Young-sang Kim, My Quoc Dang, Ngan Thi Tuyet Vu

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session CS (8:30 – 10:00) (Chairs: Guillaume Herve-Secourgeon and Quoc Bao Bui)	
Time	Content (Title)
08:30 – 08:45	<i>Behavior of prestressed concrete self-stabilizing floating fuel storage tanks.</i> D. Jiang , <u>K.H. Tan</u> (National University of Singapore), K.C.G. Ong , S. Heng , J. Dai , B.K. Lim , K.K. Ang
08:45 – 09:00	<i>Current concerns on durability of concrete used in nuclear power plants and radioactive waste repositories.</i> <u>Quoc Tri Phung</u> (Belgian Nuclear Research Centre, Belgium), Norbert Maes , Diederik Jacques
09:00 – 09:15	<i>Innovating a new kind of modular reactor power station design.</i> <u>Paul Smith</u> (Arup, UK)
09:15 – 09:30	<i>Nuclear civil engineering towards the simplification and digitalization.</i> <u>Hoang Bui Nguyen</u> (Electricite de France, France), Pascal Charles , Hervé Blicck
09:30 – 09:45	<i>Soil-structure interaction under multiple static loads using a flexibility matrix of soil: Case study of a nuclear power plant.</i> <u>V-N. Nguyen</u> (EGIS Industries, France), P-L. Regazzoni , D. Pham Thi Anh , S. Erlicher , S. Reynaud , D. Allagnat
09:45 – 10:00	<i>Tunnel muck recycling for road construction.</i> <u>Thu-Hang Tran</u> (University of Transport and Communications, Vietnam), Minh-Long Le

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session AMS3: Various structures (10:30 – 12:00) (Chairs: Alexis Beakou and The Truyen Tran)	
Time	Content (Title)
10:30 – 10:45	<i>Application of the THIN-WALL-2 V2.0 program for analysis of thin-walled sections under localised loading.</i> <u>Van Vinh Nguyen</u> (The University of Sydney, Australia), Gregory J. Hancock, Cao Hung Pham
10:45 – 11:00	<i>On the finite element modeling of the screwed connections of cold-formed steel.</i> <u>Minh Toan Huynh</u> (The University of Sydney, Australia), Cao Hung Pham, Gregory J. Hancock
11:00 – 11:15	<i>Shear resistance behaviors of a newly puzzle shape of crestbond rib shear connector: an experimental study.</i> Thi Hai Vinh Chu, Van Phuoc Nhan Le, Duy Kien Dao, Thanh Hai Nguyen, Duc Vinh Bui (Ho Chi Minh City University of Technology, Vietnam)
11:15 – 11:30	<i>Tensioning process update for cable stayed bridges.</i> Jose Antonio Lozano-Galant, Xu Dong, Jose Turmo (Universitat Politècnica de Catalunya BarcelonaTech, Spain)
11:30 – 11:45	<i>Systematic analysis of the concept of equivalent linear behavior in seismic engineering.</i> <u>Thuong Anh Nguyen</u> (École Spéciale des Travaux Publics, France), Pierre Labbé, Jean-François Semblat, Guillaume Hervé
11:45 – 12:00	<i>Numerical analysis of hybrid walls using FEM.</i> <u>Van Toan Tran</u> (Thuy Loi University, Vietnam)

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session WTE2: Environment (10:30 – 12:00) (Chairs : Jean-Luc Bertrand-Krajewski – Tan Phong Nguyen)	
Time	Content (Title)
10:30 – 10:45	<i>On the use of foam for the in situ remediation of polluted heterogeneous soils.</i> <u>H. Bertin</u> (Institut de Mécanique et d'Ingénierie de Bordeaux, France), Del Campo E. Estrada, O. Atteia
10:45 – 11:00	<i>A modified model for the prediction of bioclogging in saturated porous media.</i> <u>Hoang Lam Pham</u> (Laboratoire des Ecoulements Geophysiques et Industriels, France), Philippe Sechet, Zhujun Huang
11:00 – 11:15	<i>Processes causing strong acidic groundwaters in and around the Mekong Delta area.</i> <u>Quang-Khai Ha</u> (Kunsan National University, South Korea), Seunghyun Choi, Kangjoo Kim
11:15 – 11:30	<i>Removal of Cd(II) from aqueous solutions using red mud/graphene composite.</i> <u>Xuan Linh Ha</u> (Thai Nguyen University, Vietnam), Ngan Hanh Hoang, Thi Trang Nhung Nguyen, Thi Thuy Nguyen, Thanh Hai Nguyen, Van Thanh Dang, Nhat Huy Nguyen
11:30 – 11:45	<i>Studies on the photocatlytic activity of metal oxide and their composite for dye degradation application.</i> <u>Tchakala Ibrahim, Kodom Tomkouani, M. Vedhanayagam, Alfa-Sika Mande Seyf-Laye</u> (University of Lomé, Togo), K.J. Sreeram, Bawa L. Moctar, Djaneye-Boundjou Gbandi

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session IDM2: Structures (10:30 – 12:00) (Chairs: Quoc Hung Ung and Christophe Rouzaud)	
Time	Content (Title)
10:30 – 10:45	<i>A new formula for the shear strength of exterior rc beam-column joints using headed bars.</i> Minh Tien Nguyen, Minh Tung Tran, Quoc Bao Bui (Ton Duc Thang University, Vietnam)
10:45 – 11:00	<i>Experimental investigation of bond-dependent coefficient of glass fiber reinforced polymer bars.</i> Thuy Duong Tran (National University of Civil Engineering, Vietnam), Manh Hung Nguyen, Trung Hieu Nguyen
11:00 – 11:15	<i>Experimental research on flexural strengthening of two-way reinforced concrete slabs using carbon fiber reinforced polymer sheets.</i> Manh Hung Nguyen (Vinh University, Vietnam), Thuy Duong Tran, Trung Hieu Nguyen
11:15 – 11:30	<i>BATIPACK®: An innovative and ecologic building process.</i> N. Matiere, Q.H. Ung (Matiere SAS, France)
11:30 – 11:45	<i>Review of direct strength method of design for cold-formed steel structures with holes with A focus on shear.</i> Song Hong Pham, Cao Hung Pham (The University of Sydney, Australia), Gregory J Hancock
11:45 – 12:00	<i>Improving the understanding of tunnel excavation under pressure using a small-scale EPBS model.</i> Berthoz N. (Tunnels Study Centre, France), Branque D., Subrin D., Wong K. K.

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session AMS4: Modelling (13:45 – 15:15) (Chairs: Alexis Beakou and The Truyen Tran)	
Time	Content (Title)
13:45 – 14:00	<i>Crack propagation analysis in concrete dams based on the extended finite element method.</i> <u>Thi Tuyet Giang Vo</u> (Ho Chi Minh City University of Technology, Vietnam), Vo Trong Nguyen
14:00 – 14:15	<i>Modelling the static interaction between a shallow foundation and soil base using contact conditions.</i> <u>H.T. Tai Nguyen</u> (Thu Dau Mot University, Vietnam), T. Hang Nguyen, N. Hung Nguyen
14:15 – 14:30	<i>Numerical simulations of cold-rolled aluminium alloy 5052 channel sections in stub column tests.</i> Le Anh Thi Huynh, <u>Cao Hung Pham</u> (The University of Sydney, Australia), Kim J.R. Rasmussen
14:30 – 14:45	<i>The roles and effects of friction in cohesive zone modelling: A thermodynamics-based formulation.</i> <u>Giang D. Nguyen</u> , and Ha H. Bui
14:45 – 15:00	<i>Finite strain plasticity formulations for dynamic beams with and without rotational degrees of freedom.</i> <u>Tien Long Nguyen</u> (Tractebel, France), Carlo Sansour, Mohammed Hjjaj
15:00 – 15:15	<i>A probabilistic explicit cracking model for steel fibres reinforced concretes (SFRC).</i> <u>Rossi Pierre</u> (Institut Français des Sciences et Technologies des Transports, de l'Aménagement et des Réseaux, France), Tailhan Jean-Louis

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session IDM3: Methods (13:45 – 15:15) (Chairs: Christophe Rouzaud and Quang Huy Nguyen)	
Time	Content (Title)
13:45 – 14:00	<i>In-plane behavior of seismically damaged clay masonry walls repaired with external TRC.</i> <u>Thi-Loan Bui</u> (University of Transport and Communications, Vietnam), Xuan-Huy Nguyen, A. Si Larbi
14:00 – 14:15	<i>Impact of measurement errors in inverse analysis.</i> Jun LEI, Jose-Antonio Lozano-Galant, Maria Nogal, Dong Xu, Jose Turmo (Polytechnic University of Catalonia, Spain)
14:30 – 14:45	<i>Quantitatively analysing holistic risk and testing the accident coping strategies.</i> <u>Paul Smith</u> (Arup, UK)
14:45 – 15:00	<i>The need for a holistic approach to address future emerging risks.</i> <u>Paul Smith</u> (Arup, UK)
15:00 – 15:15	<i>Transmissibility Based operational modal analysis in presence of harmonics.</i> <u>Van-Dong Do</u> (Université de Clermont-Ferrand, France), Thien-Phu Le, Alexis Beakou

DETAILED PROGRAM SCHEDULE OF SESSIONS

THE SECOND DAY (27 October 2017)

Technical Session MFC5: Various materials (13:45 – 15:15) (Chairs: Xuan Hong Vu and Tuncer B. Edil)	
Time	Content (Title)
13:45 – 14:00	<i>Durability of polyester-based GFRP subjected to hybrid environmental and mechanical loads.</i> Song Wang, <u>Mohamed ElGawady</u> (Missouri University of Science and Technology, USA)
14:00 – 14:15	<i>Effect of manufacturing process on material properties at the corners of G450 cold-formed steel channel sections.</i> Huu Nam Trinh, Gwénaëlle Proust, <u>Cao Hung Pham</u> (The University of Sydney, Australia)
14:15 – 14:30	<i>Fresh properties and early compressive strength of alkali-activated high calcium fly ash paste.</i> Eslam Gomaa, Simon Sargon, Cedric Kashosi, <u>Mohamed ElGawady</u> (Missouri University of Science and Technology, USA)
14:30 – 14:45	<i>Investigation on the blended cement mixture of sintered clinker of calcium sulfoaluminate cement and granulated blast furnace slag.</i> <u>Khanh Son Nguyen</u> (Ho Chi Minh city University of Technology, Vietnam), Tuan Nghia Le, Thi Anh Quyen Nguyen, Phung Anh Toan Nguyen, Ngoc Tri Huynh Nguyen, Quang Minh Do
14:45 – 15:00	<i>Seismic performance of hollow-core composite columns under cyclic loading.</i> Mohanad M. Abdulazeez, <u>Mohamed A. ElGawady</u> (Missouri University of Science and Technology, USA)
15:00 – 15:15	<i>Synergic effects of activation routes of ground granulated blast-furnace slag (GGBS) used in the precast industry.</i> <u>Martin Cyr</u> (University Paul Sabatier, France), Ludovic Andre