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Jay Sanjayan, Monash University, Melbourne
Greg Schofield, Greg Schofield & Associates Pty Ltd, Melbourne
Ahmad Shayan, Australian Road Research Board, Melbourne
Scott Smith, University of Technology, Sydney
Geoff Taplin, Maunsell, Melbourne
John Wilson, Swinburne University of Technology, Melbourne

Local Organising Committee

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Saman de Silva, RMIT University
Rebecca Gravina, RMIT University
Tom Molyneaux, RMIT University
Sujeeva Setunge, RMIT University
Ron Wakefield, RMIT University

ISEC Website

http://isec.uni-mb.si
Martin Loosemore

Martin Loosemore is Professor of Construction Management and Associate Dean at the University of New South Wales, Sydney, Australia. He is a Fellow of the Royal Institution of Chartered Surveyors (FRICS) and Fellow of the Chartered Institute of Building (FCIOB). Martin provides strategic advice about the development and implementation of risk and opportunity management systems to many private and public sector organisations and NGOs in Australia and Asia.

In 2002, Martin was a consultant to the Australian Royal Commission into the Building Industry, advising on international workplace reform and productivity. Recently he has also worked with Tsinghua University in China, the Beijing Olympic Organizing Committee (BOCOG) and the Ministry of Science and Technology in China to develop a risk and opportunity management system for the 2008 Beijing Olympic games facilities. He has published many articles and four international books in risk management, crisis management, facilities management, occupational health and safety and human resource management.

In 2000 he was awarded the American Society of Civil Engineers’ Engineering Management - Outstanding Journal Paper Award for peer-reviewed paper entitled "The psychology of accident prevention in the construction industry". In 2002 he was awarded the UK Literati Club Highest Commendation Award for a paper entitled "Customer focussed benchmarking in facilities management". In May 2004, he was winner of Literati award for excellence for an article entitled flexible problem solving in construction projects on the national museum of Australia project, published in the International Journal of Team Performance Management.

In March 2006, he was appointed a visiting Professor at the
Graduate School of Engineering, Chinese Academy of Sciences in Beijing and received an International Innovation Award from the UK's Chartered Institute of Building for his work in developing and implementing an innovative risk and opportunity management system for Multiplex Facilities Management. This unique approach is documented in the recent book: Loosemore, M., Raftery, J., Reilly, C. and Higgon, D (2005) Risk Management in Projects, Taylor and Francis, London.

Top

Roger Flanagan

Professor of Construction Management, School of Construction Management and Engineering, Engineering, University of Reading

Non-Executive Director of Skanska AB (parent company of the Skanska Group world wide) and the Halcrow Group.

Advisor to the World Economic Forum, Switzerland, for the Engineering and Construction Sector Governor’s Meeting, Davos.

Member of the College of Assessors for the Engineering & Physical Sciences Research Council (EPSRC), Built Environment Programme.

Top

Tristram Carfrae

Structural Engineer

Profession
Current Position Principal, Arup Fellow
Joined Arup 1981
Qualifications MA - Mechanical Sciences Tripos, Cambridge University
Tristram is responsible for the design of an impressive array of award winning buildings and is regarded internationally as a leading designer of sporting stadia and light weight long-span structures.

Tristram is behind the design of The Water Cube - Beijing's National Swimming Center for the 2008 Olympics. He also boasts an impressive portfolio of facilities created for the 2000 Sydney Olympics, including the RAS Exhibition Halls, the Dunc Gray Velodrome, and the Olympic Tennis Centre.

He has also helped design six structures that have won Special Awards from the Institute of Structural Engineers (IStructE) - the world's premier structural accolade. No other structural engineer has achieved this.

Tristram believes that good buildings should consume less materials, energy, time and money while at the same time providing greater amenity. He has a reputation for challenging the established way of doing things, to explore better solutions, moulding both materials and people to his vision.

He is one of six Arup Fellows (out of a global staff of 7,000). This accolade honours those who have significantly contributed to the firm's reputation for excellence in innovation and design and designates him as a leader with the role of ensuring this continues.

This year, Tristram was named as one of Australia's Top 100 most influential engineers. He was Australian Professional Engineer of the Year in 2001.

Top

Narayan Swamy

Professor Narayan Swamy is currently Professor Emeritus in the Department of Mechanical Engineering at the University of Sheffield, England. Professor Swamy has been involved in teaching, research, design and consultancy for over forty five years. In all these activities he has adopted a HOLISTIC approach integrating material characteristics and structural performance with DESIGN as a total concept of civil engineering construction. His research activities reflect this approach, and encompass a wide range of inter-related and interdependent topics concerned with concrete materials,
concrete structures, their interactive performance in real environments, design and construction. Professor Swamy has lectured extensively all over the world, especially on topics such as Technology Transfer, Holistic Design and Design for Durability, Environment and Sustainability.

Professor Swamy has had the privilege to guide and train over one hundred Doctorate students leading to the publication of over two hundred refereed papers in Journals and Conferences. He has received many Research Awards, has edited a large number of books, and has been the Founder Editor of the Journal Cement and Concrete Composites for over 27 years. He has extensive international research collaboration, and considers Teaching and Research to be interactive and inter-disciplinary activities.

Professor Swamy is a Fellow of the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (ISTRuCTE), the Institution of Mechanical Engineers (IMechE), the American Concrete Institute (ACI) and the American Society of Civil Engineers (ASCE). He is also a post Chairperson of the Yorkshire sections of the Concrete Society, ICE and IStructE.

Top

V. Ramakrishnan

Prof. V. Ramakrishnan is the Regents Distinguished Professor at the Technological University of South Dakota. He graduated with two D.I.C degrees and a Ph.D. from the Imperial College of Science and Technology, University of London in 1960.

He has done extensive research and applications using concrete fiber composite for the past 30 years. He has been consultant to all the major fiber producers (both steel and synthetic) in U.S.A. He has authored or co-authored 3 books and more than 250 papers of which more than 10 papers were on non-destructive testing of concrete. He has done a lot of research and has field experience in using non-destructive testing techniques for evaluating concrete.

Dr. Ramakrishnan has received numerous awards including ACI/CANMET Award for his contributions in fiber reinforced Concrete and CRC Robert Phileo Award for excellence in research from the ACI.
Dr. Ramakrishnan an international consultant has been invited thrice by the Chinese government in 1987 and 1989. Third time he visited China in 1997 as consultant for a fiber distribution company. He had presented papers and lectures in Australia, Japan, U.K, Canada, all countries in Europe, India, Thailand, Taiwan, Singapore, Trinidad, Jamaica, Egypt, Mexico, Brazil, Mongolia etc.

To recognize the tremendous impact that he has made in advancing higher education and materials research and for his contributions to the state, the governor of South Dakota State proclaimed September 29, 2002, as "Dr. Venkataswamy Ramakrishnan Day".

For his substantive contributions to South Dakota School of Mines & Technology research activities in concrete technology and other areas, a new materials laboratory at the university was dedicated as Rama Materials Laboratory in April 2002.

Top

**Ian R. Thomas**

Professor Thomas is Director of the Centre for Environmental Safety and Risk Engineering (CESARE) at Victoria University, Melbourne, Australia. In this role he is responsible for wide ranging research on fire safety in buildings and on risk management. He graduated in civil engineering at Monash University in 1968 and with a PhD at the same university in 1972 (Thesis title: Reinforced Concrete Hyperbolic Paraboloid Shell Structures). This was followed by seven years of experience of general steelwork design, development of steel building systems and methods of design and analysis. During this period involvements included work with the Australian Institute of Steel Construction on standardized connections and membership of several Standards Australia committees including the Crane Code sub-committee ME5/1 Structures and the Steel Structures Code Committee BD1. From 1979 to the 1999 he was with BHP Melbourne Research Laboratories, initially concentrating on steel structures but subsequently was responsible for projects dealing with the behaviour of structures in fire and mechanical and structural engineering in a wide range of applications.

Professor Thomas is a pioneer of the change in fire safety practice from the prescriptive approach to the
performance-based fire Safety Engineering approach. In 2002 Professor Thomas and two colleagues won the Chapman Medal given by the Institution of Engineers, Australia, for the best paper published in 2001 in the Australian Journal of Structural Engineering and in 2004 with Dr Ian Bennetts was awarded the Jack Bono Engineering Communications Award by the Society of Fire Protection Engineers (USA) for the paper published in Volumes 12 and 13 of the Journal of Fire Protection Engineering that most contributed to the advancement and application of fire protection engineering.

Top
## Friday, 28 September 2007

**13:40 - 14:40**

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<td>13:40 – 13:55</td>
<td>Chair: Dr. Tom Molyneaux Innovative Structural Design (III) Ballroom</td>
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<td>13:55 – 14:10</td>
<td>Chair: Dr. Takashi Tasumi Geotechnical Engineering, Foundation and Tunnelling – (II) The Library</td>
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<td>14:10 – 14:25</td>
<td>Chair: Dr. Swapami Saha Construction Planning and Project Management – (IV) Trilogy</td>
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<td>14:25 – 14:40</td>
<td>Chair: Prof. Roger Flanagan Concrete Masonry and Structures – (VI) Fairmont One</td>
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<td>14:40 – 14:55</td>
<td>Chair: Dr. Richard Ekhaus Bridges and Special Structures – (II) Fairmont Two</td>
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## Wednesday, 26 September 2007

**9:00-11:00**

- Registration and Welcome Morning Tea

**11:00-11:30**

- Opening Ceremony
  - **First Keynote**
    - The drivers and issues shaping the construction sector
    - R. Flanagan
    - Reading University, UK

**11:30-12:05**

- **Second Keynote**
  - Development of new construction materials for structural use
  - V. Ramakrishnan
  - South Dakota School of Mines and Technology, USA

**12:05-12:40**

- Lunch

**12:40-14:00**

- First Parallel Sessions

**14:00-14:15**

- **A review and critical comparison of the provisions for the anchorage of tensile reinforcement in American, European and Australian Standards**
  - R.I. Gilbert
  - The University of New South Wales, Sydney, Australia

**14:15-14:30**

- **A rammed earth and concrete wall system for sustainable housing**
  - P. Patnaik & T. Molyneaux
  - School of Civil, Environmental and Chemical Engineering, RMIT University Melbourne, Australia

**14:30-14:45**

- **Self-compacting concrete for direct finish structures**
  - R. Hela & L. Bodnarova
  - Brno University of Technology, Faculty of Civil Engineering, Brno, Czech Republic

**14:45-15:00**

- **Plastic deformation of a ring system during intensive collision**
  - J. Shen & G. Lu
  - Swinburne University of Technology, Hawthorn, Victoria, Australia

**15:00-15:15**

- **S-N curves for thin CHS-CNS T-joints under in-plane bending using the hot spot stress method**
  - F.R. Mashin
  - University of Tasmania, School of Engineering, Hobart, Tasmania, Australia

**15:15-15:30**

- **Comparison of various delay analysis methodologies for construction projects**
  - J.B. Yang
  - Institute of Construction Management, Chung Hua University, Hsinchu, Taiwan

**15:30-15:45**

- **New solution of S curve analysis and SYSCAB-POERP system**
  - P.L.S. Yi
  - City Great Information Technology Co., Ltd., Taipei, Taiwan
14:30 – 14:45
Flexural fatigue response of latex modified reinforced concrete beams
B.K. Prasad
Department of Civil Engineering, NIT Jamshedpur, India
U. Gupta & U.B. Choubey
Shri G. S. Institute of Technology and Science, Indore, India

Ready mixed self compacting lightweight concretes
R. Helia & M. Hubertova
Brno University of Technology, Institute of Technology of Building Materials and Components, Brno, Czech Republic

Failure modes of clamped square steel beams subjected to blast loads
H. H. Jama, M. R. Bam-bach, R.H. Grzebienta & X-L. Zhao
Department of Civil Engineering, Monash University, Clayton, Australia
G. N. Nurick
Blast Impact and Survivability Research Unit (BISRU), Department of Mechanical Engineering, University of Cape Town, South Africa

Investigation on basic and optimum COF of frame structures using fishbone-shaped model
Y.S. Zhao & W.C. Pu
Nagoya Institute of Technology, Nagoya, Japan

Analysis of construction accidents using data from OSHA citations for safety violations
H. Al-Qalyuby & M.A. Usmen
Department of Civil and Environmental Engineering, Wayne State University, Detroit, Michigan, USA

14:45 – 15:00
Structural precast concrete in Melbourne, Australia
S. R. Hughes
Hollow Core Concrete Pty Ltd, 12-14 Maria Street Laverton North Australia

A study on the durability of porous concrete using slag-gypsum cement
Y. Mitsuoka & J. Nakamoto
Wakayama National College of Technology, Gobo, Wakayama, Japan
K. Arno
Anan National College of Technology, Anan, Tokushima, Japan
K. Yokoi
Kochi National College of Technology, Nango-ku, Kochi, Japan

Seismic retrofit of reinforced concrete structures without adhesive anchors
T. Ohmura
Musashi Institute of Technology, Tokyo, Japan
S. Hayashi
Tokyo Institute of Technology, Kanagawa, Japan
K. Karata
Taisei, Kanagawa, Japan
T. Fujimura
Taisei, Tokyo, Japan

Corrosion and fatigue behaviors of steel plates at the boundary with concrete
I.T. Kim
Pusan National University, Busan, Korea
S. Kainuma
Kyushu University, Fukuoka, Japan
N. Hosomi
TTK Corporation, Ibaraki, Japan

The impact of value improving practices on project performance
J.P. Lozon & G.F. Jergas
University of Calgary, Calgary, Alberta, Canada

15:00 – 15:15
Structural behaviour of R/C cylindrical panel with gable wall
T. Hara & N. Hashimoto
Tokuyama College of Technology, Shunan, Japan

Stochastic variability of input parameters for calculation of autogenous shrinkage of hardening concrete
H.W.M. van der Ham, E.A.B. Koenders & K. van Breugel
Delft University of Technology, The Netherlands

Numerical and experimental studies on active control of structures using hyper vision technology
J. Motiyama & T. Nakayama
Graduate Student, Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan
H. Nakamura, T. Tsuji & I. Ishii
Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan

Damage assessment of MR steel frames with a simple criterion based on stiffness deterioration
H. Moharrami & H. Madani
Tarbiat Modares University, Tehran, Iran

The prototype of materials requirement system in the construction project
N.-H. Pan & K.-Y. Chen
Department of Construction Engineering, National Yunlin University of Science and Technology, Taiwan

12:10 – 12:25
Predicting strength of concrete using Sclerometer – reliability of the regression model
Universiti Putra Malaysia, Serdang, Selangor, Malaysia
W.A.M Thanoon
Universiti Teknologi Petronas, Bandar Seri Iskandar, Tronoh, Malaysia

Spatial tracking challenge for Augmented Reality on building construction sites
P.S. Dunston, J.V. Sinfield & D. Shin
Purdue University, School of Civil Engineering, West Lafayette, Indiana, USA

Shop drawing automation and material waste minimization in the construction of wood houses utilizing 3D-CAD and optimization techniques
J. D. Manrique & M. Al-Hussein
Department of Civil & Environmental Engineering, Clayton, Alberta, Canada
R. Naseri
Landmark Group of Builders, Edmonton, Alberta, Canada

Space optimization for panelized prefabricated wood structure for residential construction
A. ElGanainy, J. Olearczyk & N. Hosomi
University of Alberta, Edmonton, Alberta, Canada

Recycling concrete rubble with reactive aggregates from ASR-affected bridge pier
A. Sugiyama, K. Tori, K. Sakai, K. Shimizu & Y. Sato
Department of Civil and Environmental Engineering, Div. of Natural Science & Technology, Kanazawa University, Kanazawa, Ishikawa, Japan

12:25 – 12:40
Lunch

12:40 – 13:40
Virtual testing of compressive strength of concrete
E.A.B. Koenders & E. Schlangen
Microlab, Delft University of Technology, Delft, The Netherlands
E. Dado
Processes in Building, Delft University of Technology, Delft, The Netherlands
Wednesday, 26 September 2007

15:15 – 15:30

Behavior of concrete prism under cyclic reversed loading
G.L. Yuan & Q.T. Li
China University of Mining Technology, Xuzhou, Jiangsu, China

Study on the development of medium strength self-compacting concrete using fly ash
A.K. Bose
ITD Cementation India Limited, Kolkata, India

Seismic design vs. progressive collapse: a reinforced concrete framed structure case study
A.M. Ioannidi, H.L. Cucu & C. Mirea
Technical University of Cluj-Napoca, Romania

Steel plate pre-stressing for notched steel girder ends
M. Sakano
Kansai University, Osaka, Japan

Management information system for home building enterprises
H. Yu, & M. Al-Hussein
University of Alberta, Edmonton, Canada

15:30—16:15

Afternoon Tea Break

16:15—17:45

Second Parallel Sessions

Chair: Prof. Takashi Hara
Concrete and Masonry Structures – (II)
Ballroom

Chair: Prof. Rudolf Heia
Concrete Materials – (II)
Trilogy

Chair: Prof. V. Bhishma
Dynamic Impact and Earthquake Engineering – (II)
The Library

Chair: Prof. P.K. Singh
Steel Structures – (II)
Fairmont One

Chair: Prof. Sureeja Setunge
Construction Planning and Project Management – (II)
Fairmont Two

16:15 – 16:30

Performance-based optimization of strut-and-tie models in reinforced concrete deep beams
Q.Q. Liang, Faculty of Engineering and Surveying, University of Southern Queensland, Toowoomba, Australia

Use of low frequency dielectric spectroscopy for monitoring cement hydration kinetics
L. Hardel, G. Mandžuka & D. Korošak
University of Maribor, Faculty of Civil Engineering, Maribor, Slovenia

Characteristics of quality factor of ground identified using vertical array records of earthquake motions
O. Tsuchihara
Department of Civil Engineering, Waseda University, Tokyo, Japan

Ultimate slip behavior of double-lined perforated rib connector
M. Himakasu & K. Fuji
Graduate School of Engineering, Hiroshima University, Hiroshima, Japan

Fuzzy Optimization of construction project network with multiple objectives
A.V.S.S. Kumar
Department of Civil Engineering, and Artificial Intelligence Centre, Osmania University, Hyderabad, India

16:30 – 16:45

Study on R/C member subjected to torsion, and axial force
H. Tsukada, T. Shimagata & T. Tamura
Tokyo University of Technology, Tokyo, Japan

Strength of mortar containing activated slag
A.A. Adam, T.C.K. Molyneaux, I. Patnaikuni & D. Law
ITD Cementation India Limited, Kolkata, India

Effectiveness of base isolation system for simple RC frame buildings
V. Kilar & D. Koren
University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia

Effect of semicircle notching on fatigue life of welded joints between steel deck and vertical stiffeners
Y. Kawakami
Hanshin Expressway Management Technology Center, Osaka, Japan

Identification of corrective action recommendation for Labor Management in project cost control
L.S. Ranitini, A. Veronika & B.A. Firmansyah
Construction Management, University of Indonesia, Depok, Indonesia
16:45 – 17:30
Reliability of bond measuring devices in pre-tensioned prestressed concrete
I.R.A. Weerasekera & A. Sabesh
Department of Civil Engineering, University of Moratuwa, Sri Lanka
R.E. Looy
Department of Civil Engineering, The University of Calgary, Alberta, Canada

Searching for an optimal technical solution and concrete mixture for erosion prevention in dam slides
A. Kryzanowski, M. Mikoł & I. Planinic
University of Ljubljana, Faculty of Civil and Geodetic Engineering, Ljubljana, Slovenia
J. Suliterkić
IRMA Institute, Ljubljana, Slovenia

Identification of representative and efficient groups of design earthquake inputs
T. Trombetti, S. Silvestri, D. Mavrolita & G. Gasparini
DISTART Department of Construction, University of Bologna, Italy

Understanding service stresses in drainpipe tubular structures
F.R. Masihi
University of Tasmania, School of Engineering, Hobart, TAS, Australia
X.L. Zhao & D. Pang
Department of Civil Engineering, Monash University, Clayton, VIC, Australia
P. Dayawansa, H. Jiao & G. Chitty
Maintenance Technology Institute, Monash University, Caulfield East, VIC, Australia
J. Price
Department of Mechanical Engineering, Monash University, Clayton, VIC, Australia

A major change order in a naval jetty construction project: a case study
M.T. Gargari
College of Applied Science, University of Cincinnati, Cincinnati, Ohio, USA

17:00 – 17:15
Corewall and outriggers as lateral system for the Peak at Sudirman Jakarta
D. Sukamta
Indonesian Society of Civil and Structural Engineers
Davy Sukamta & Partners, Structural Engineers, Indonesia

The effect of reinforcement type on the ductility and robustness of one-way reinforced concrete slabs
R.J. Gilbert & Z.I. Sakkia
The University of New South Wales, Sydney, Australia

Maximum rotational response of asymmetric structures: estimation through a simple (code-like) but effective formula
G. Gasparini, T. Trombetti & S. Silvestri
DISTART Department of Construction, University of Bologna, Italy

Collapse mode of plate girder with thick flange under bending
M. Ikawa, K. Fuji & H. Nakamura
Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan
Y. Ogasawara
Mes Technologies Co., Ltd., Okayama, Japan

17:15 – 17:30
Experimental investigation on the behavior of RC flat plat structure with nonrectangular columns
W. Liu
School of Civil Engineering & Architecture, Beijing Jiaotong University, Beijing, China
C. Huang
School of Civil & Hydraulic Engineering, Dalian University of Technology, Dalian, China

Alkali silica reactivity of various aggregates in saturated NaCl solution
K. Yamada
R&D Center Taichyo Cement Corp., Chiba, Japan
T. Fuji & A. Imai
Earth Resource Engineering, Kyushu University, Fukuoka, Japan
Y. Kawabata & H. Matsushita
Civil Engineering, Kyushu University, Fukuoka, Japan

Use of toggle brace system for the amplification of seismic damper motion in building structures
G. Gasparini, T. Trombetti, S. Silvestri & M. Bottazzi
DISTART Department of Construction, University of Bologna, Italy

Application of hybrid laser beam + electric arc processes to steel welding
S. Misovic & E. Tatta
Department of Mechanical Engineering, II University of Rome, Italy
A. Sili
Department of Chemistry and Materials Engineering, University of Messina, Italy

Friday, 28 September 2007

11:10—12:40
Eighth Parallel Sessions

Chair: Mr. Lev Razdolsky
Innovative Structural Designed II – Ballroom

Design and construction of a retaining wall constructed from soil-bags
H. Yamamoto & S. Jin
Graduate School for International Development and Cooperation, Hiroshima University, Hiroshima, Japan

Analytical study on nonlinear behavior of a new raft foundation system
W. Li
School of Civil Engineering, Shenyang Jiaotong University, Shenyang, Liaoning, China
K. Takeuchi
Takeuchi & Partners Architects Engineers Office LTD., Minohara, Hiroshima, Japan

Retrofitting reinforced concrete bridge frames using externally bonded FRP sheets
G.R. Pandey
James Cook University, Townsville, Queensland, Australia
H. Mutsyuoshi
Saitama University, Saitama city, Saitama prefecture, Japan

Identification of the factors in corporate management that influence construction company’s performance in Indonesia
A. Veronika, L.S. Riantini & B.A. Firmansyah
Universitas Indonesia, Jakarta, Indonesia

Hardened properties of Polyvinylalcohol fibres in fibre reinforced concrete
K. Holschemacher & S. Hör
Leipzig University of Applied Science, Department of Civil Engineering, Leipzig, Germany
U. Pachow
DuraPlat GmbH, Haan, Germany

11:10 — 11:25
Chair: Prof. John Buckenridge
Geotechnical Engineering, Foundations and Tunnelling – I – Atrium

Two general methods for creating tensile structures of towers, arches, bridges and stadium roofs
Y. Zhou, Y.M. Xie & X. Huang
School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia

Dynamic analysis of pile foundations with the deepened pile-cap
A.O. Kolesnikov & V.N. Popov
Institute of Theoretical and Applied Mechanics (SB RAS), Novosibirsk, Russia

Fissural behaviour of GFRP reinforced beams in local environment: an experimental study
P.J. Rao, K.J. Rao & N.V.R.C. B. Bhaskar
Faculty of Civil Engineering, Vassavi College of Engineering, Hyderabad, A.P, India
M.V.S. Rao
Director, Consultancy Services, IIT University, Hyderabad, A.P, India

Establishing measures to improve design quality in the Portuguese construction industry
J. P. Couto
University of Minho, Guimaraes, Portugal

Study on the expansion behavior and microstructure of self-stressing concrete filled steel tube
C. Huang, Z. Shang & F. Jang
Dalton University of Technology, Dalian, China

11:25 – 12:00
Chair : Prof. Vojo Kilar
Composite Materials – II – Fairmont One

Reliability of bond measuring devices in pretensioned prestressed concrete
I.R.A. Weerasekera & A. Sabesh
Department of Civil Engineering, University of Moratuwa, Sri Lanka
R.E. Looy
Department of Civil Engineering, The University of Calgary, Alberta, Canada

Searching for an optimal technical solution and concrete mixture for erosion prevention in dam slides
A. Kryzanowski, M. Mikoł & I. Planinic
University of Ljubljana, Faculty of Civil and Geodetic Engineering, Ljubljana, Slovenia
J. Suliterkić
IRMA Institute, Ljubljana, Slovenia

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T. Trombetti, S. Silvestri, D. Mavrolita & G. Gasparini
DISTART Department of Construction, University of Bologna, Italy

Understanding service stresses in drainpipe tubular structures
F.R. Masihi
University of Tasmania, School of Engineering, Hobart, TAS, Australia
X.L. Zhao & D. Pang
Department of Civil Engineering, Monash University, Clayton, VIC, Australia
P. Dayawansa, H. Jiao & G. Chitty
Maintenance Technology Institute, Monash University, Caulfield East, VIC, Australia
J. Price
Department of Mechanical Engineering, Monash University, Clayton, VIC, Australia

A major change order in a naval jetty construction project: a case study
M.T. Gargari
College of Applied Science, University of Cincinnati, Cincinnati, Ohio, USA

12:00 – 12:40
Chair: Dr. Peter Dunstan
Different Countries – (III) – Ballroom

Corewall and outriggers as lateral system for the Peak at Sudirman Jakarta
D. Sukamta
Indonesian Society of Civil and Structural Engineers
Davy Sukamta & Partners, Structural Engineers, Indonesia

The effect of reinforcement type on the ductility and robustness of one-way reinforced concrete slabs
R.J. Gilbert & Z.I. Sakkia
The University of New South Wales, Sydney, Australia

Maximum rotational response of asymmetric structures: estimation through a simple (code-like) but effective formula
G. Gasparini, T. Trombetti & S. Silvestri
DISTART Department of Construction, University of Bologna, Italy

Collapse mode of plate girder with thick flange under bending
M. Ikawa, K. Fuji & H. Nakamura
Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan
Y. Ogasawara
Mes Technologies Co., Ltd., Okayama, Japan

12:40 – 13:20
Chair: Dr. Sai On Cheung
Construction Materials – (II) – Fairmont Two

Experimental investigation on the behavior of RC flat plat structure with nonrectangular columns
W. Liu
School of Civil Engineering & Architecture, Beijing Jiaotong University, Beijing, China
C. Huang
School of Civil & Hydraulic Engineering, Dalian University of Technology, Dalian, China

Alkali silica reactivity of various agglomerates in saturated NaCl solution
K. Yamada
R&D Center Taichyo Cement Corp., Chiba, Japan
T. Fuji & A. Imai
Earth Resource Engineering, Kyushu University, Fukuoka, Japan
Y. Kawabata & H. Matsushita
Civil Engineering, Kyushu University, Fukuoka, Japan

Use of toggle brace system for the amplification of seismic damper motion in building structures
G. Gasparini, T. Trombetti, S. Silvestri & M. Bottazzi
DISTART Department of Construction, University of Bologna, Italy

Application of hybrid laser beam + electric arc processes to steel welding
S. Misovic & E. Tatta
Department of Mechanical Engineering, II University of Rome, Italy
A. Sili
Department of Chemistry and Materials Engineering, University of Messina, Italy

Integrating theory of inventive problems solving into the Valais Engineering process
X.M. Mao
University of Alberta, Edmonton, Canada
X.Q. Zhang
The Hong Kong University of Science and Technology, Kowloon, Hong Kong
S. Abu Raih
University of Alberta, Edmonton, Canada
### Friday, 28 September 2007

| 10:10 – 10:25 | Structure generation using evolutionary algorithms  
A. Hofmann  
Bollinger und Grohmann GmbH, Vienna, Austria  
F. Scheurer  
ETH Zurich / designproduction GmbH, Zurich, Switzerland  
K. Bollinger & M. Grohmann  
Bollinger und Grohmann GmbH, Frankfurt, Germany | Fire load in a steel building design  
L. Razdolsky  
LR Structural Engineering Inc, Lincolnshire, Illinois, USA  
University of Illinois at Chicago, Chicago, Illinois, USA | Finite element analysis of rectangular concrete columns confined by CFRP laminates under axial and lateral loads  
Civil Engineering Department, Faculty of Engineering, Assuit University, Assuit, Egypt | Alteration of structures as an uncertainty process  
W. Graf, B. Müller & M. Bartisch  
Institute of Statics and Dynamics of Structures, TU Dresden, Germany  
Application of favorability – reality index in evaluation of organization performance, case study: implementation plan of quality management system  
M. Ahmadinejad, J. Ayoubinejad, M. Maghrebi & G. Ghaemani  
Iran University of Science and Technology, Tehran, Iran |

| 10:25 – 10:40 | Integrated computerized multi-disciplinary design environment for building structures  
P. Felicetti  
Felicetti Pty Ltd Consulting Engineers, Melbourne, Australia  
Y.M. Xie  
School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia | Study on fire behavior in varied high-rise forms: pilot study  
A.T. Onyenobi, B.J Hudson & C.M. Ormerod  
University of Salford, Greater Manchester, Lancashire, United Kingdom | Fatigue durability improvement of RC beams strengthened with carbon fiber sheets by attaching U-shaped end anchoring  
H.S. Choi & J.Y. Park  
Department of Civil Engineering, Pusan National University, Busan, Korea  
B.S. Cho  
Department of Civil Engineering, Inje University, Gimhae, Korea  
J.H. Cheung  
Department of Civil Engineering, Pusan National University, Busan, Korea | Assessment of load bearing structures  
L. Ozola  
Latvija University of Agriculture, Jelgava, Latvia  
J. Miljan & T. Keskküla  
Estonia University of Life Sciences, Tartu, Estonia  
Assessing the readiness of construction quality assessment systems (CONQUAS) deployment within UK construction organisations  
N. Chileshe & Y.L. Sim  
Sheffield Hallam University, Sheffield, United Kingdom |

| 10:40 - 11:10 | Morning Tea Break |  |  |

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### Wednesday, 26 September 2007

| 17:30 - 17:45 | An investigation of the application of spun-cast prestressed steel fiber reinforced concrete poles  
S. Zhao, R. Gao & X. Li  
North China University of Water Conservancy and Electric Power, Zhengzhou, Henan, China | Study on sulfate corrosion of spun-cast steel fiber reinforced concrete  
S. Zhao, X. Li & S. Wen  
North China University of Water Conservancy and Electric Power, Zhengzhou, Henan, China | Seismic design of flat bottom silos containing grain-like material  
T. Trombetti, S. Silvestri & G. Gasparini  
DISTART Department of Construction, University of Bologna, Italy | Development and validation of a simple approach to model aerodynamic loads on a military jet intake structure  
G. Chen, R. Boykett, & K. Walker  
Defense Science and Technology Organization, Melbourne, Victoria, Australia  
Revisiting terminology in construction project management  
M. Kumaraswamy  
The University of Hong Kong, Hong Kong SAR, China  
V. Abeyskera  
Auckland University of Technology, Auckland, New Zealand |

<p>| 17:45 - 18:45 |  |  |  |<br />
| 18:45 - 20:30 | Cocktail Reception |  |  |</p>
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<td>9:00 – 9:35</td>
<td>Fifth Keynote</td>
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<td><strong>Geometry and structure – the benefit of the third dimension</strong></td>
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<td>T.G.A Carfrae</td>
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<td>Arup, Sydney, Australia</td>
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<tr>
<td>9:40 - 10:40</td>
<td>Seventh Parallel Sessions</td>
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<td>Chair: Dr. Xiangyu Wang</td>
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<td><strong>Innovative Structural Design –(I)</strong></td>
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<td>Chair : Prof. Ian Gilbert</td>
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<td><strong>Fire</strong></td>
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<td>Trilogy</td>
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<td>Chair: Prof. LY. Lu</td>
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<td><strong>Composite Materials – (I)</strong></td>
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<td>Chair: Dr. Y.L. P.</td>
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<td><strong>Structural Analysis – (III)</strong></td>
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<td>9:40 – 9:55</td>
<td>Digital architecture and its implications for structural engineering</td>
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<td>R. Hough</td>
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<td>Arup, Sydney, Australia; and</td>
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<td>University of New South Wales, Sydney, Australia</td>
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<td>S. Downing</td>
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<td>RMIT University, Melbourne, Australia</td>
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<td>J. Plume</td>
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<td>Faculty of the Built Environment, University of New South Wales, Sydney,</td>
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<tr>
<td>9:40 – 9:55</td>
<td>Finite element analysis of temperatures in concrete filled double skin</td>
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<td>steel tubes exposed to fires</td>
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<td>H. Lu &amp; X. L. Zhao</td>
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<td></td>
<td>Department of Civil Engineering, Monash University, Melbourne, Australia</td>
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<tr>
<td>9:40 – 9:55</td>
<td>Constructing bridges with glass-fiber reinforced composite decks</td>
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<td>S.W. Lee &amp; K.J. Hong</td>
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<td></td>
<td>Kookmin University, Seoul, Korea</td>
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<td>9:40 – 9:55</td>
<td>Nonlinear analysis and behavior of concrete-filled steel tubular beam-</td>
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<td>Q.Q. Liang</td>
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<td>Faculty of Engineering and Surveying, University of Southern Queensland,</td>
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<td>Toowoomba, Australia</td>
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<td>9:40 – 9:55</td>
<td>Toward building a knowledge management system in K &amp; A</td>
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<td>M. Khaled</td>
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<td>Khattab &amp; Alami Engineering Company, Beirut, Lebanon</td>
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<td>9:40 – 9:55</td>
<td>Using semantic blogging to support knowledge management in construction</td>
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<td>D. Xue &amp; C. Wang</td>
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<td>9:55 – 10:10</td>
<td>Interfacing between parametric associative and structural software</td>
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<td>J.L. Coenders</td>
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<td>Arup, Amsterdam, The Netherlands</td>
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<td>9:55 – 10:10</td>
<td>Temperature distribution in grouted sleeve connections subjected to fire</td>
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<td>and outdoor environment</td>
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<td>S. Jiang</td>
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<td>College of Civil Engineering, Tongji University, Shanghai, PR China</td>
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<td>9:55 – 10:10</td>
<td>Experimental investigation of innovative hybrid composite girders with</td>
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<td>S. Asamoto &amp; H. Mutsuyoshi</td>
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<td>Saitama University, Saitama, Japan</td>
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<td>9:55 – 10:10</td>
<td>The influence of structural and non-structural components on the lateral</td>
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<td>performance of high-rise buildings</td>
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<td>B. Li, C. F. Duffield &amp; G.L. Hutchinson</td>
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### Thursday, 27 September 2007

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<tr>
<td>8:30 - 9:00</td>
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</table>
| 9:00 – 9:35 | Third Keynote: The problems with current risk management practices: how to overcome them M. Loosemore  
Faculty of the Built Environment, University of New South Wales, Sydney, Australia |
| 9:40 - 10:40 | Third Parallel Sessions                                                                            |
| 9:40 – 9:55 | Chair: Prof. Ian Gilbert  
Concrete and Masonry Structures – (III)  
Ballroom  
Development of a semi-fabricated composite system for floor slab construction  
W.A. Thanoon  
Department of Civil Engineering, Universiti Teknologi Petronas, 31750 Tronoh, Malaysia  
M.S Jaafar & J. Noorzaei  
Department of Civil Engineering, Universiti Putra Malaysia, 43400 Serdang, Malaysia  
Determination of representative crack density of cementitious materials  
H.H. Pan, Y.W. Chen & D.H. Lin  
Department of Civil Engineering, Kaohsiung University of Applied Sciences, Kaohsiung, Taiwan  
Electronic reverse auctions in construction procurement  
B. Ozorhon & D. Arditi  
Illinois Institute of Technology, Chicago, Illinois, USA  
Lateral buckling of elastically restrained arches  
Y.L. Pi, M.A. Bradford & F. Tin-Loi  
The University of New South Wales, Sydney Australia |
| 9:55 – 10:10 | Chair: Prof. Mumtaz Usman  
Procurement, Contract and Claim  
The Library  
Minimum reinforcement and fiber contribution in tunnel linings: the Italian experience  
B. Chiaia, A.P. Fantilli & P. Vallini  
Department of Structural and Geotechnical Engineering, Politecnico di Torino, Torino, Italy  
Utilisation of quarry waste as fine aggregate in high-strength rice husk ash concrete  
S.N. Raman & M.F.M. Zain  
Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia  
H.B. Mahmud & S.L. Low  
The University of Malaya, 50603 Kuala Lumpur, Malaysia  
Additional value effects of the Specialist Task Organizations (STOs) procurement approach in a building project  
A.S. Oyegoke  
Helsinki University of Technology, Construction Economics and Management, Finland  
The analytical method in structural engineering analysis  
R. V. Jarquio  
New York City Transit, New York, USA  
ISO9001:2000-advantages and obstacles in the Portuguese construction business  
N.M. Cachadinha  
Department of Civil Engineering, Universidade Nova de Lisboa, Portugal |
| 10:10 – 11:00 | Chair: Dr. Y. X. Zhang  
Structural Analysis – (I)  
Fairmont One  
ISO9001:2000-advantages and obstacles in the Portuguese construction business  
N.M. Cachadinha  
Department of Civil Engineering, Universidade Nova de Lisboa, Portugal |
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<td>10:10 – 10:25</td>
<td>Precast concrete residential applications in the United States</td>
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<td>C.J. Perry, Perry &amp; Associates, LLC, Chicago, Illinois, USA</td>
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<td>Influence of aggregate grading on the engineering properties of lightweight aggregate concrete</td>
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<td>H.J. Chen, H.S. Peng &amp; T.H. Liu, Department of Civil Engineering, National Chung-Hsing University, Taiwan</td>
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<td>Bounded rationality, opportunism and trust in cooperative contracting</td>
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<td>S.O. Cheung, Department of Building and Construction, City University of Hong Kong, Hong Kong</td>
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<td>Displacement analysis due to shallow tunneling using bending plate</td>
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<td>Y. Tokushige &amp; T. Tsutsui, Kagoshima National College of Technology, Kagoshima, Japan</td>
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<td>Construction management during political uncertainty</td>
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<td>H.R. Pantli, A. &amp; S. Engineers, Houston, TX, USA</td>
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<td>I.B. Paudel, BSW International, Phoenix, Arizona, USA</td>
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<td>E. Koehn, Lamar University, Beaumont, TX, USA</td>
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<td>J.F. Koehn, Chadron State College, Chadron, NE, USA</td>
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<td>10:25 – 10:40</td>
<td>Strengthening of shear damaged RC beams with external clamping</td>
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<td>T.G. Sutharwadiwale &amp; T. Aravinttan, Centre of Excellence in Engineering Fibre Composites, Faculty of Engineering &amp; Surveying, University of Southern Queensland, Australia</td>
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<td>Flexural strength of concrete member with high performance expansive material</td>
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<td>K. Ishida, P.S. Matsubushi Construction Co. Ltd, Hiroshima Branch, Hiroshima, Japan</td>
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<td>Assessment of time extension clauses on claim settlement</td>
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<td>K.C. Iyer &amp; N.B. Chapalikar, Indian Institute of Technology, Delhi, New Delhi, India</td>
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<td>Analysis of orthotropic rock specimen under diametrical loadings</td>
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<td>R. Kamonhuch &amp; T. Tsutsui, Kagoshima National College of Technology, Kagoshima, Japan</td>
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<td>Some effects of culture in industry and on projects in South Africa</td>
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<td>B. Eksaen, Faculty of Engineering, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa</td>
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<td>S. Krause, Department of Industrial Engineering, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa</td>
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<td>10:40 – 11:10</td>
<td>Morning Tea Break</td>
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<td>11:10 – 12:40</td>
<td>Fourth Parallel Sessions</td>
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<td>11:10 – 11:25</td>
<td>Experimental determination of energy absorption capacity for prestressed concrete sleepers under impact loads</td>
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<td>A.M. Remennikov &amp; S. Kae-wunnen, University of Wollongong, Wollongong, NSW, Australia</td>
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<td>Research on influence factors of coefficients of thermal expansion of concrete</td>
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<td>G. Gao, C. Qian, C. Zhu &amp; S. Ding, School of Materials Science and Engineering, Southeast University, Nanjing 210096, China</td>
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<td>A theoretical framework for optimizing risk allocation and management in Public-Private Partnership projects</td>
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<td>X.-H. Jin &amp; H. Dolci, Faculty of Architecture Building &amp; Planning, University of Melbourne, Melbourne, Victoria, Australia</td>
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<td>Structural art in arch bridge design in Croatia</td>
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<td>J. Radić, A. Mandić &amp; A. Kindli, Faculty of Civil Engineering, University of Zagreb, Croatia</td>
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<td>The effect of political unrest on construction time for food grain warehouses in Bangladesh</td>
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<td>L. Choudhury, Texas A&amp;M University, College Station, Texas, USA</td>
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<td>11:25 – 11:40</td>
<td>Unburied offshore pipeline stability analysis under severe storm condition</td>
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<td>T. Takatani, Maizuru Nat`l College of Technology, Maizuru, Kyoto, Japan</td>
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<td>D. Brooker, MCS, Perth, Western Australia, Australia</td>
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<td>Fragility analysis of liquid storage steel tanks in seismic areas</td>
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<td>A. Di Carolu, G. Manfredi &amp; I. Iervolino, Department of Structural Engineering, University of Naples “Federico II”, Naples, Italy</td>
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<td>Rehabilitation of non-durable RC moment-resisting frames with poor beam-column joints</td>
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<td>Y.C. Wang &amp; K. Hsu, Department of Civil Engineering, National Central University, Taiwan</td>
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<td>A strain based damage model for structural concrete</td>
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<td>K. Thapa &amp; S. Yazdani, Department of Civil Engineering, North Dakota State University, Fargo, USA</td>
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<td>M. Feng, Department of Civil Engineering, University of Californiva, Irvine, USA</td>
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<td>Topology optimization of nonlinear structures for energy absorption</td>
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<td>X. Huang &amp; Y.M. Xie, School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia</td>
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<td>G. Lu, Faculty of Engineering and Industrial Sciences, Swinburne University of Technology, Hawthorn, Melbourne, Australia</td>
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<tr>
<td>11:40 – 12:00</td>
<td>Lunch</td>
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<td>12:00 – 13:20</td>
<td>Uniballroom</td>
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<td>13:20 – 14:00</td>
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<td>Parallel Sessions</td>
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<td>15:30 – 16:00</td>
<td>Lunch</td>
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<td>17:20 – 18:00</td>
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<td>18:00 – 22:00</td>
<td>Banquet</td>
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### Thursday, 27 September 2007

| 15:35—16:00 | Afternoon Tea Break |
| 16:05—16:20 | Sixth Parallel Sessions |
| Chair : Dr. Leszek Janusz | Chair : Prof. Jay Sanjayan | Chair : Prof. T. Jagannadha Rao | Chair : Prof. Sam Fragomeni | Chair : Prof. Gerhard Grauscheid |
| Computational Mechanics | Dynamic Impact and Earthquake Engineering | Structural Analysis | Structural Optimization & Evolutionary Procedures |
| Ballroom | (IV) The Library | (II) Fairmont One | (I) Fairmont Two |

#### 16:05 – 16:20
Formulation of a nonlinear shear-flexible rectangular layered reinforced concrete plate element by updated Lagrangian approach

Y. X. Zhang
Division of Engineering, Science and Technology, UNSWASIA, Singapore

Dynamic response of a damped orthotropic plate on Pasternak foundation to dynamic moving loads

S.W. Aisigbhaba & W. Wangsadimita
Tarumanagara University, Jakarta, Indonesia

Shear crack width of concrete member under axial load and transverse reversed cyclic load

T. Tsukiba
Department of Civil Engineering, Yokohama National University, Yokohama, Japan

Analytical solutions for in-plane displacements of curved beams

X.F. Li & Y.H. Zhao
Institute of Road and Bridge Engineering, Dalian Maritime University, Dalian, Liaoning, China

#### 16:20 – 16:35
Object-oriented programming of rectangular truss element

J.F. Jiang, L. Huang & X. Cao
School of Civil & Hydraulic Engineering, Dalian University of Technology, Dalian, China

Stochastic analysis of maximum responses of frame structures using a fishbone-shaped model

W.C. Pu & Y.G. Zhao
Nagoya Institute of Technology, Nagoya, Japan

Shear crack behavior of the R/C member covered by acrylic resin and random staple glass fiber matting

T. Tamura & M. Tokuda
Tokuyama College of Technology, Tokuyama, Japan

Analytical solution of dynamic analysis of structures with smooth hysteresis

C.H. Wang
CSIRO Division of Sustainable Ecosystems, Melbourne, Australia

Study on the fracture behavior of the R/C member covered by acrylic resin and random staple glass fiber matting

T. Kadonaga
Nagoya University of Technology, Nagoya, Japan

Integrated equation of motion for dynamic analysis of structures with smooth hysteresis

G.H. Wang
CSIRO Division of Sustainable Ecosystems, Melbourne, Australia

Object-oriented programming of rectangular truss element

F. Jiang, L. Huang & X. Cao
School of Civil & Hydraulic Engineering, Dalian University of Technology, Dalian, China

Stochastic analysis of maximum responses of frame structures using a fishbone-shaped model

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Integrated equation of motion for dynamic analysis of structures with smooth hysteresis

C.H. Wang
CSIRO Division of Sustainable Ecosystems, Melbourne, Australia

#### 11:25 – 11:40
Use of fault tree analysis in risk assessment of reinforced concrete bridges exposed to aggressive environments

W. Zhu, S. Setunge, R. Gravina & S. Venkatesan
RMIT University, Melbourne, Victoria, Australia

Risk consideration in the handling of a large scale engineering project

C.K. Tse & W.M. Wong
City University of Hong Kong, Hong Kong

Fatigue in concrete decks of cable supported bridges

P.K. Singh
Department of Civil Engineering, Institute of Technology, Banaras Hindu University, Varanasi, India

#### 11:40 – 11:55
Internal temperature rise and early thermal stresses in concrete

B.M. Abbas & R.S. Al Mahaidi
Department of Civil Engineering, Monash University, Melbourne, Australia

Multiscale modeling of concrete strength

C. Liu
Department of Civil & Environmental Engineering, Villanova University, USA

Developing a framework of retained risk in Public Private Partnership (PPP) social infrastructure projects

H.K. Dole & P. Raisbeck
Faculty of Architecture, Building and Planning, The University of Melbourne, Australia

The usage of glued laminated timber structures in architecture

V. Kilar & S. Vratuša
University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia

#### 11:55 – 12:10
Development of a simple and low cost shear connector for minimizing tripping hazards of pedastrian concrete pavements

Y.C. Koay, Y.M. Xie & S. Selunge
School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia

Sulfate resistance of fly ash concrete in wet-dry conditions

N. Ghafouri & H. Diasara
Department of Civil and Environmental Engineering at the University of Nevada, Las Vegas, USA

Risk ranking from the factors in feasibility study of building construction in Indonesia

B.A. Firmansyah, A. Veronika & L.S. Riantini
Construction Management, University of Indonesia, Depok, Indonesia

Effects of heavy truck load on medium span bridge girders

X. Zhou & A. Saber
Department of Civil Engineering, Louisiana Tech University, Ruston, LA, USA

Determinants of construction company’s success performance indicators in Indonesia

M. Seniwongse
Design Construction Consultants Corporation, Boston, Massachusetts, U.S.A.

#### 12:10 – 12:25
Behaviour of fibre reinforced concrete slabs

M.N.S. Hadi
School of Civil, Mining and Environmental Engineering, University of Wollongong, Wollongong, NSW, Australia

Investigation of hot-pressing process for manufacturing of hardwod particleboard

D. Panpipitaya, S. Setunge, N. Gamage & M. Jollands
RMIT University, Melbourne, Victoria, Australia

Vulnerability of glass windows to explosions

H.S. Sutiswo, T. Ngo, C. Liu, Wangsadinata & S.W. Alisjahbana
RMIT University, Melbourne, Australia

Construction project management of large concrete arch bridges in Croatia

Ž. Žderi, D. Živković & D. Šmolić
KONSTRUKTOR INŽENJERING, Split, Croatia

Identification of the cause of external factor problems that influence construction company’s performance in Indonesia

D. K. Sehgal
Civil Engineering Department, University of Indonesia, Depok, Indonesia

#### Thursday, 27 September 2007

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<td>Use of fault tree analysis in risk assessment of reinforced concrete bridges exposed to aggressive environments</td>
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<td>Internal temperature rise and early thermal stresses in concrete</td>
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<td>11:55 – 12:10</td>
<td>Development of a simple and low cost shear connector for minimizing tripping hazards of pedestrian concrete pavements</td>
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<td>12:10 – 12:25</td>
<td>Behaviour of fibre reinforced concrete slabs</td>
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12:25 – 12:40
Experimental work on reinforced and prestressed concrete deep beams with various web openings
T.M. Yoo, J.H. Doh & H. Guan
Griﬃth University, Gold Coast, Queensland, Australia
S. Fragomeni
Victoria University, Melbourne, Victoria, Australia

Hemp utilization in cement-bonded particle boards
F. Kheif & J. Bydžovský
Brno University of Technology, Faculty of Civil Engineering, Brno, Czech Republic

Evaluation and rehabilitation of concrete bridges in USA
M. Seriowski
Design Construction Consultants Corporation, Boston, Massachusetts, USA

The insuﬃciently recognized importance of specialty trade contractors in the U.S. construction industry
R. Pietroforte
Worcester Polytechnic Institute, Worcester, USA

N. Costantino
Polytechnic of Bari, Bari, Italy

12:40 - 13:40
Lunch

Thursday, 27 September 2007

13:40 - 14:15
Fourth Keynote
Structural response as an aspect of fire safety of buildings
R. Thomas
Centre for Environmental Safety and Risk Engineering, Victoria University, Melbourne, Australia

14:20 - 15:35
Fifth Parallel Sessions

Chair: Prof. Faiss Moomen
Sustainability Ballroom

Chair: Prof. Amanjit Singh
Education and Training Trilogy

Chair: Prof. Mohd. Saleh
Dynamic Impact & Earthquake Engineering – (III)

Chair: Prof. Xiao-Ling Zhao
Steel Structures – (III)

Chair: Mr. Richard Eckhaus
Life Cycle Analysis

Lunch

Thursday, 27 September 2007

14:20 – 14:35
Sustainability and livability: residents’ experience of the Ecocome in Melbourne
S. Rahman, I. Pataniuk & S. De Silva
RMIT University, Melbourne, Victoria, Australia

Investigation and comparison of the earthquakes of Silakhor desert and Bam
H. Niroumand
Asian Civil Research Institute, Tehran, Iran
S.M. Zahrai
School of Civil Engineering, University of Tehran, Iran

The design of portal frames using cold-formed channel sections: A comparison of Australian, US and European requirements
D.T. Vyden & J.E. Mills
University of South Australia, Adelaide, Australia

Life cycle cost analysis for home purchase
A. Singh & K. Gautam
University of Hawai’i at Manoa, Honolulu, Hawai’i, USA

14:35 – 14:50
Sustainability and limit states of existing bridges in Croatia
J. Radic & A. Mandic
Faculty of Civil Engineering, University of Zagreb, Croatia

Application of ethics in engineering practice... quis custodiet ipsos custodes?
J. St. J. S. Buckeridge
School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia

Investigation and comparison of the earthquakes of Silakhor desert and Manjil
H. Niroumand
Asian Civil Research Institute, Tehran, Iran

Finite element modelling of steel lattice tower legs reinforced for increased loads
C. Tongkongsarn, J. Mills & Y. Zhuge
University of South Australia, Adelaide, Australia

Probabilistic risk-based LC NVF Model
G. Girmscheid
Institute for Construction Engineering and Management, ETH Zürich, Switzerland

14:50 – 15:05
The reduction of negative residential construction environmental impacts through the use of modular construction techniques
D. Osele, S. de Silva & Y.M. Xie
RMIT University, Melbourne, Australia

Seismic proof for moment-resisting R.C. structures considering member displacement
W.P. Sung
National Chin-Yi University of Technology, Taipai, Taichung, Taiwan, R.O.C.
M.H. Shih & C.L. Chen
National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan, R.O.C.

Elastic-plastic local stability and load-carrying capacity of steel members
P. Juhás
University of South Australia, Adelaide, Australia

Use of ICT to improve quality, whole life costs and communications
A.J. Christie, M. Issa & J.H. Rankin
University of New Brunswick, Fredericton, New Brunswick, Canada

15:05 – 15:20
Passive design and thermal performance of houses for local climate
B. Su
School of Architecture and Landscape Architecture, UNITEC New Zealand, Auckland, New Zealand

Integrating Augmented Reality into design and architecture curriculum
K. Wang
Key Centre of Design Computing and Cognition, University of Sydney, Australia
J. Chen
High-grade Highway Administration Bureau of Jiangxi Province, Nanchang, Jiangxi, P.R. China

Probabilistic seismic risk assessment methodology for industrial facilities
K. Hassimoto, T. Kondoh, H. Nakamura & K. Fuji
Graduate School of Engineering, Hiroshima University, Hiroshima, Japan

Experiments on ultimate bending strength of corrugated thin cylindrical shells
S. Li & F. Xu
RGC/CER, Faculty of Real Estate and Construction Management, Hong Kong University, Hong Kong
L. Zhang
Civil Engineering College, Chongqing University, Chongqing, China

Study on sustainable project management based on lifecycle theory
S. Liu & F. Xu
RGC/CER, Faculty of Real Estate and Construction Management, Hong Kong University, Hong Kong

15:20 – 15:35
Safety and sustainability of monolithic dome structures in hurricane prone regions
K.R. Grosskopf & J. Sullivan
University of Florida, Gainesville, Florida, USA

The Solar Decathlon: lessons learned from transportable solar houses
K.E. Hedges, A.S. Denzer & C. Yavuzturk
Department of Civil and Architectural Engineering, University of Wyoming, Laramie, WY, USA

The reduction of negative residential construction environmental impacts through the use of modular construction techniques
D. Osele, S. de Silva & Y.M. Xie
RMIT University, Melbourne, Australia

Seismic response characteristics of a multi-span continuous rigid-frame bridge constructed on soft ground
K. Kinoshita, H. Nakamura & K. Fuji
Graduate School of Engineering, Hiroshima University, Hiroshima, Japan
Y. Fujitani
PS Mitsubishi, Osaka, Japan

A new approach to design and modeling of flexible corrugated steel plate structures under construction
L. Janusz
ViaCon-Poland, Rydzyna, Poland
D. Kapitanski
Poznan University of Technology, Poznan, Poland

Applying systems engineering for adding value in the built environment
H. de Ridder & R. Vrijhoef
Delft University of Technology, Faculty of Civil Engineering, Delft, The Netherlands
Friday, 28 September 2007

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<td>14:10 – 14:25</td>
<td>Non-destructive evaluation of corrosion activity in reinforced concrete slab</td>
<td>M.E. Ismail &amp; M. Ismail, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia M. Ohtsu, Kumamoto University, Kumamoto, Japan</td>
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<td>Industrialization of foundation in house-building: put into practice</td>
<td>S.P.G. Moonen, Eindhoven University of technology, Eindhoven, the Netherlands</td>
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<td>Behaviour of glass fibre reinforced gypsum wall panel under cyclic lateral loading</td>
<td>M. Janardhana, JNTU College of Engineering, Hyderabad, India &amp; Department of Civil Engineering, IIT Madras, Chennai, India A. M. Prasad &amp; D. Menon, Department of Civil Engineering, IIT Madras, Chennai, India</td>
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<td>Nonlinear analysis of shear wall system with optimal membrane triangles including soil structure interaction</td>
<td>M. Paknahad, J. Noorzaei, M.S. Jaafar &amp; W.A.M. Thanoon, Civil Engineering Department, University Putra Malaysia, Serdang, Selangor, Malaysia</td>
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<td>Calculation method of concrete shrinkage based on coupling heat and moisture transfer</td>
<td>C.X. Qian &amp; D.P. Chen, School of Materials Science and Engineering, Southeast University, Nanjing, China</td>
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<td>14:25 – 14:40</td>
<td>Inspection of steels size using radioactive methods</td>
<td>M.C. Chen &amp; Y.L. Jan, Department of Civil Engineering, Ching Yun University, Jung-li, Taiwan</td>
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<td>HDD – Horizontal Directional Drilling, pressure related failures caused by pilot drilling operations</td>
<td>B. Schaller &amp; G. Girmscheid, Institute for Construction Engineering and Management, ETH Zurich, Zurich, Switzerland</td>
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<td>Non-linear FE analysis of continuous prestressed concrete beams</td>
<td>H. Faleh, Department of Civil Engineering, Monash University, Melbourne, Australia I.A.S Al-Shaarbaf, Al-Nahrain University, Baghdad, Iraq</td>
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<td>Nonlinear analysis of a reinforced concrete shallow arch using a new layered cylindrical quadrilateral element</td>
<td>Y. X. Zhang, Division of Engineering, Science and Technology, UNSWASIA, Singapore</td>
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<td>A copolymer as a concrete admixture</td>
<td>J.W. Chen, F.T. Jiang &amp; K.C. Hsu, Department of Chemistry, National Taiwan Normal University, Taipei, Taiwan, ROC Y. N. Sheen, Department of Civil Engineering, National Kaohsiung University of Applied Sciences, Taiwan, ROC</td>
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<td>14:40—15:00</td>
<td>Closing Ceremony</td>
<td>&quot;Afternoon Tea&quot;</td>
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