



Final Report of CECAR5

Report by: Mr Paul Mitchell Chair of ACECC 2007-10
Mr Steve Finlay Secretary General ACECC 2007-10

Summary

The Fifth Civil Engineering Conference in the Asian Region (CECAR5) under the auspices of the Asian Civil Engineering Coordinating Council (ACECC) and organised by Engineers Australia's Local Organising Committee (EALOC) was held in Sydney, Australia, from 8 to 11 August 2010. The Conference attracted 537 participants from the 10 ACECC member countries and 59 from non-member countries.

The Technical program attracted 235 papers in the 21 topic areas and 28 poster papers were also presented. In addition there were 7 presentations by ACECC Society Presidents, multiple papers presented during the six Special Sessions and 6 student papers. The technical site tours were less attractive with only 24 participants for the 3 sites arranged.

The Conference was financially successful generating a gross surplus of \$118,182.06 and, in accordance with Clause IV (3) of the By Laws, 40% of that surplus will be transferred to ACECC.

Background to CECAR5

Engineers Australia (EA) submitted the only bid to hold CECAR5 at the 12th Executive Committee Meeting (ECM) of ACECC in Los Angeles in October 2005. EA was unanimously endorsed as the host country.

The EALOC was subsequently endorsed by the ECM at its 16th meeting in February 2008 in Sydney with Mr Brian O'Donnell as the Chair of EALOC. Reports on the planning for CECAR5 were submitted and endorsed at the 16th, 17th, 18th and 19th ECMs.

The EALOC, with concurrence from ACECC, selected "Innovative Community Building" as the Conference theme. The following technical session categories were adopted:

- Climate change and coastal management
- Water management
- Innovative construction (Project management and methods)
- Mining Infrastructure (Industry needs and issues)
- Sustainable infrastructure
- Transportation and road safety
- Disaster reduction and recovery
- Leadership (Management and ethics)
- Geotechnical engineering
- Asset management
- Waste management (Solid & water waste)
- Analysis methods
- Bridge and infrastructure engineering
- Building applications
- Concrete structures
- Soil/structure interaction
- Steel and composite structures
- Structural control and dynamics
- Structural failures
- Structural health Monitoring
- Sustainability issues in structures

Venue and Registration

The Conference was held at the Sydney Convention Centre, Darling Harbour, Sydney Australia. The attendees numbered 596 as shown in the table below.

Country	Delegates	Accompanying Persons	Total
Australia	221	11	232
Bangladesh	1	0	1
Brazil	1	1	2
China	7	1	8
Egypt	2	0	2
Germany	3	0	3
Hong Kong	3	1	4
India	4	5	9
Indonesia	7	1	8
Iran	6	1	7
Japan	71	7	78
Korea	46	5	51
Kuwait	1	0	1
Lebanon	1	0	1
Libya	1	0	1
Malawi	1	0	1
Malaysia	4	0	4
Mongolia	13	1	14
Nepal	1	0	1
New Zealand	7	0	7
Oman	2	0	2
Philippines	69	20	89
Saudi Arabia	2	0	2
Spain	2	1	3
Taiwan ROC	33	0	33
Thailand	5	1	6
Turkey	1	0	1
United Kingdom	2	1	3
United States	15	5	20
Vietnam	2	0	2
Total	534	62	596

Opening Ceremony

Engineers Australia was delighted to have the Governor of New South Wales, Her Excellency Marie Bashir, officially open the Conference on Monday morning 8 August. It was a full house and the Governor gave an inspirational address praising the innovative and humanitarian work done by engineers for the benefit of mankind. A copy of the Governor's speech is attached (Attachment 1).

Key Note Speakers

The Conference was very fortunate to have the following eminent speakers present compelling papers as keynote speakers:

Dr Jenn-Chuan Chern – “The Strategies and Post-Disaster Reconstruction of Typhoon Morakot in Taiwan”

Dr.Jenn-Chuan Chern received his Ph.D. in civil engineering from Northwestern University in 1984. He was the Distinguished Professor of Civil Engineering at National Taiwan University. Dr.Chern received the Outstanding Contribution of Concrete Technology in Taiwan Award from ACI in 1997 and International Contribution Award from Japan Society of Civil Engineers (JSCE) in 2008. Dr.Chern is a fellow of ACI and a corresponding member of International Academy of Engineering of Russia. He is the immediate past chair of Executive Committee of Asian Civil Engineering Coordinating Council (ACECC) and the past vice president of the Asian Concrete Federation (ACF). He has served two terms as the president of Chinese Institute of Civil and Hydraulic Engineering (CICHE) and is first president of Taiwan Concrete Institute (TCI).

Mr Ian Firth – “Strengthening and upgrading the West Gate Bridge, Melbourne”

Ian joined Flint & Neill in 1979 and became a Partner in 1990 and Chief Operating Officer in 2008. He has 29 years of experience working on the design, construction and maintenance of a wide variety of bridge projects worldwide. These include several major long span crossings, such as the Tsing Ma, KapShuiMun, Ting Kau and Stonecutters bridges in Hong Kong and the Humber, Forth, Severn, Wye, Erskine and Cleddau bridges in the UK, as well as many others worldwide.

Professor Roger Plank - “Current developments in structural engineering in Europe”

Professor Roger Plank studied at the University of Birmingham in the Department of Civil Engineering, gaining a BSc Degree in 1970 and a PhD in 1973. He gained practical design experience with a structural engineering consultant, working on a wide range of building structures, and became a chartered engineer in 1976 when he joined the Department of Civil and Structural Engineering at the University of Sheffield. He was a leading member of a group which developed software for both teaching and engineering design, with funding from a variety of sources.

Student Papers

The following student papers were presented in the relevant session category:

ASCE	Amy D. LU	Lab Test Study of Effects of Pile Press-In on Adjacent Earth Retaining Structures
CICHE	Wen-Ting Hu	A bridge monitoring and pre-warning system for collapse detection
EA	William Hutton	Young Engineers and the Community
JSCE	Yuya SAKAI	Numerical analytical discussion for practical application of ductile concrete with expansive additive
KSCE	Seung Ho Choi	Preparing for the Age of Water in S. Korea
VFCEA	PHAM Tung Lam	Sea level rise in Vietnam -from civil engineer's perspective

Presidential Papers

The following Presidential papers were presented in the relevant session category:

ASCE	Blaine D. Leonard	Civil Engineering Creating A Sustainable World
CICHE	Ching-Lung Liao	Sculpting the Earth – The Role and Stage of Civil Engineers
EA	Doug Hargreaves	Population growth and infrastructure in Australia - 2050
HAKI	Dradjat Hoedajanto	Earthquake and future construction practices in Indonesia
ICE (India)	S L Swamy	India's water resources and their management
JSCE	Kenji SAKATA	Concrete technology in the era of global warming
KSCE	Kyung Soo CHON	Transport Strategies for Green Growth - East Asian Region

Special Sessions

Six Special Forums were conducted on the third day of the Conference as follows:

- Life-cycle Cost and Performance in Engineering, TC10 (ASCE)
- Anti Corruption in Construction (ASCE & EA)
- Construction Planning and Communication (CICHE)
- Disaster Mitigation, Adaptation and Preparedness Strategies (DMAPS), TC7 (PICE)
- Humanitarian Aid By Engineers (EA)
- Harmonization of Design Codes, TC8 (JSCE)

Technical Program

The Technical program was conducted over two days with 235 papers presented in 21 categories. There were also 28 Poster papers presented.

The papers presented by delegates, according to country, are shown in the table below:

Country	Papers	Posters
Australia	75	2
Bangladesh	1	
China	7	
Germany	4	
Hong Kong	5	
India	5	
Indonesia	7	
Iran	8	2
Japan	46	1
Korea	14	15
Lebanon	1	
Malawi	1	
Malaysia	3	3
Nepal	1	
Norway	1	1
Philippines	11	
Saudi Arabia	1	
Taiwan ROC	13	2
Thailand	3	
Turkey	2	1
United Kingdom	3	
United States	8	
Vietnam	2	
Unidentified	13	1
Total	235	28

Technical Site Tours

The following technical tours were available and unfortunately the 24 participants were far fewer than the value the tours represented:

Site Tour: Cockatoo Island Heritage

Formerly an imperial prison, then later a shipyard with the one-time largest dry dock in world, Cockatoos Island was home to one of Australia's most significant maritime workshops in the twentieth century.

Site Tour: Port Botany Expansion

Sydney Ports Corporation's major expansion of its container port facilities at Port Botany to cater for long term trade growth. The expansion is one of the largest port projects to be undertaken in Australia in the last 30 years. 60 hectares of reclaimed land and 1,850m of additional wharf face for five extra shipping berths.

Site Tour: Sydney Desalination Plant

In mid 2007, the NSW Government awarded a Design, Build, Operate and Maintain Contract for a world class Reverse Osmosis Desalination Plant on the Kurnell Peninsula, on the outskirts of Sydney, to a joint venture of John Holland and Veolia Water. The Sydney Desalination Plant is a drinking water supply project operated by Sydney Water, Sydney's State-owned water supply corporation. The Kurnell plant is the third major desalination plant built in Australia.

Exhibitions

All 35 booths were taken up with sponsors/exhibitors and ACECC member societies.

Social Program

Welcome Reception

The Welcome Reception was held on the Sunday evening leading into the Conference. It was attended by 250 delegates who attended the Exhibition Opening and enjoyed an excellent networking opportunity.

Gala Dinner and ACECC Awards

The highlight of the Conference was the Gala Dinner on the Tuesday night when the ACECC Awards were presented. This was "An Engineering Celebration" during which ten years of ACECC history was remembered and former Chairmen were acknowledged.

The Masters of Ceremony for The Awards were Mr Paul Mitchell, Chair of ACECC, and Dr. Kenichi Horikoshi of JSCE, Chair of the ACECC Awards Sub-Committee.

The following Awards were presented:

ACECC Outstanding Civil Engineering Project Award	Taiwan High Speed Rail Project, Taiwan ROC. Nominated by CICHE
ACECC Civil Engineering Project Award	Incheon Bridge, Korea. Nominated by KSCE
ACECC Civil Engineering Project Award	Bali Beach Conservation Project, Indonesia. Nominated by JSCE
ACECC Civil Engineering Project Award	Delhi Metro Rail Corporation Ltd Project, India Nominated by ICE(India)
ACECC Civil Engineering Achievement Award	Dr. Jenn-Chuan Chern (Public Construction Commission Taiwan)
ACECC Civil Engineering Achievement Award	Prof. NAKAMURA Hideo (Tokyo City University)
ACECC Civil Engineering Achievement Award	Dr. Kuang-II Kim (Samjung Steel Company Ltd.)

ACECC Activities

The program of ACECC activities, listed below, was conducted over two days preceding CECAR5 and included the Presidential Meeting at which a formal communiqué, based upon the theme of the conference, was prepared and delivered to the delegates during the closing ceremony by the outgoing Chairman of ACECC. A copy of the Presidents' Communiqué is attached to this report (Attachment 3).

Saturday, August 7	
0900 - 1030	8 TH Technical Coordinating Committee Meeting
1030 - 1045	Morning Tea
1045 - 1200	Lunch
1300 - 1500	13 TH Planning Committee Meeting
1500 - 1515	Afternoon Tea
1515 - 1630	13 TH Planning Committee Meeting
1800 - 2000	ACECC Welcome Reception - ACECC delegates and partners by invitation – Sydney Harbour cruise
Sunday, August 8	
0830 - 0900	Membership Meeting
0900 - 1030	19 th Executive Committee Meeting
1030 - 1045	Morning Tea
1045 - 1200	19 th Executive Committee Meeting
1200 - 1300	Lunch
1300 - 1500	19 th Executive Committee Meeting
1500 - 1530	Afternoon Tea
1530 - 1730	Presidential Meeting - by invitation
1800 - 1900	CECAR5 Welcome Drinks - all CECAR5 delegates
1930 - 2230	ACECC Presidents Dinner - Presidents and partners by invitation Hosted by Industry New South Wales at Waterfront Restaurant

Financial Report

A summary of the budget with actual income and expenditure revenues is attached (Attachment 2). A certified audited Financial Report is being prepared for Engineers Australia's Local Organising Committee and will be forwarded to ACECC member organisations with the Minutes of the 20th ECM.

The following table summarizes expected and actual ACECC contributions towards the conference:

Corporate Contribution CECAR5		
Member Organisations	Requested Contribution	Actual Contribution
(AU)		
ASCE	28,000	27,800.46
CICHE	28,000	27,753.54
EA	21,000	21,000.00
JSCE	35,000	19,988.00
KSCE	21,000	21,000.00
PICE	7,000	6,988.00
HAKI	7,000	6,988.00
ICE(I)	7,000	6,988.00
MACE	0	0.00
VFCEA	0	0.00
Total	154,000	138,506.00

ATTACHMENT 1

CONFERENCE OPENING SPEECH

BY

THE GOVERNOR OF NEW SOUTH WALES

SPEECH AT OPENING
OF
THE 5TH CIVIL ENGINEERING CONFERENCE IN THE ASIAN REGION and
THE AUSTRALASIAN STRUCTURAL ENGINEERING CONFERENCE 2010

INNOVATIVE COMMUNITY BUILDING

SYDNEY CONVENTION AND EXHIBITION CENTRE, DARLING HARBOUR
Monday 9th August 2010

**HER EXCELLENCY PROFESSOR MARIE BASHIR AC CVO
GOVERNOR OF NEW SOUTH WALES**

MR PAUL MITCHELL, *Chairman of the Asian Civil Engineering Coordinating Council*

MR BRIAN O'DONNELL AND MR PHILIP BLUNDY, *Conference Co-Chairs*

PROFESSOR DOUG HARGREAVES, *National President of Engineers Australia*

DISTINGUISHED INTERNATIONAL ENGINEERING PRESIDENTS FROM INDIA, INDONESIA,
JAPAN, KOREA, MONGOLIA, THE PHILIPPINES, TAIWAN, UNITED STATES AND VIETNAM

PROFESSOR OSAMU KUSAKABE, *First Secretary General of the Asian Civil Engineering
Coordinating Council*

VISITING DELEGATES — INTERNATIONAL AND NATIONAL

IT IS INDEED A GREAT PLEASURE TO JOIN YOU ALL THIS MORNING, AND TO EXTEND THE
WARMEST OF WELCOMES TO THOSE OF YOU WHO HAVE TRAVELLED FROM ACROSS THE
WORLD OR ACROSS OUR CONTINENT TO SHARE YOUR KNOWLEDGE AND EXPERIENCE AT
THIS IMPORTANT GATHERING.

I TRUST THAT DESPITE THE BUSY SCHEDULES AND THE CHALLENGING AND STIMULATING
AGENDA AHEAD, YOU WILL HAVE TIME TO ENJOY THE BEAUTY AND RICH DIVERSE
CULTURAL OFFERINGS OF OUR HOSPITABLE CITY OF SYDNEY, AND EVEN BEYOND TO
AREAS OF GREAT ENGINEERING INTEREST ACROSS OUR LAND.

AT THIS POINT, I WISH TO RECORD MY RESPECT FOR THE TRADITIONAL OWNERS OF THIS
LAND UPON WHICH WE GATHER, — THE GADIGAL PEOPLE OF THE EORA NATION — THEIR
ANCESTORS AND DESCENDANTS, INDEED FOR ALL ABORIGINAL AUSTRALIANS WHO HAVE
NURTURED OUR GREAT CONTINENT FOR TENS OF THOUSANDS OF YEARS.

I AM INDEED GRATEFUL THAT MANY OF YOUR ENGINEERING COLLEAGUES ARE
ENCOURAGING AND SUPPORTING THE ENTRY OF YOUNG INDIGENOUS SCHOLARS, SOME
FROM REMOTE REGIONS IN AUSTRALIA, INTO THE PROFESSION OF ENGINEERING.

AN ENGINEERING CONFERENCE SUCH AS THIS, FOCUSSED ON 'INNOVATIVE COMMUNITY BUILDING' IS DRAWING TOGETHER THE FINEST PROFESSIONALS OF OUR ASIAN REGION. YOU WILL CERTAINLY SHARE UNIQUE EXPERTISE FROM YOUR DIVERSE REGIONS AND EXTEND FURTHER THE FRONTIERS OF EXCELLENCE ACROSS YOUR PROFESSION. THIS COLLABORATION STANDS TO BENEFIT THE WHOLE WORLD.

AS EVERY VISITOR TO SYDNEY WILL READILY NOTE, THE PHYSICAL PROFILE, THE FAMILIAR ICONIC IMAGES WHICH IMMEDIATELY DEFINE THIS HARBOUR CITY — THE HARBOUR BRIDGE AND THE SYDNEY OPERA HOUSE — REPRESENT EXCEPTIONAL INNOVATION IN ENGINEERING AND CONSTRUCTION FOR THEIR ERA — THE HARBOUR BRIDGE IN THE EARLY 1930'S AND THE SYDNEY OPERA HOUSE IN THE EARLY 1970'S.

CERTAINLY, EVERY PERIOD WILL PRESENT EVER DEMANDING CHALLENGES IN CIVIL AND STRUCTURAL ENGINEERING, SOME BROUGHT ABOUT BY COMPLEX TERRAIN, BY CLIMATE CHANGE, BY COASTAL MANAGEMENT AND THE CONTINUING DEMAND FOR, AND DEVELOPMENT OF, MINERAL RESOURCES WORLDWIDE BUT PARTICULARLY IN OUR ASIAN REGION.

THIS 5TH CIVIL ENGINEERING CONFERENCE HAS DRAWN TOGETHER ALMOST 600 DELEGATES FROM A REGION WHICH IS DETERMINED TO WORK TOGETHER, PROVIDING SOLUTIONS TO SO MANY OF THE CRITICAL ISSUES FACING OUR PLANET THIS CENTURY, A CENTURY ALREADY BEING DEFINED WORLDWIDE AS 'THE CENTURY OF ASIA'.

INDEED, AS WE SPEAK, MANY THOUSANDS OF OUR FELLOWS ACROSS THE WORLD ARE BEING AFFECTED BY CATASTROPHIC FLOODS WITH TRAGIC LOSS OF LIFE AND VAST DESTRUCTION OF PROPERTY AND CIVIC INFRASTRUCTURE. THIS IS HAPPENING NOT ONLY IN OUR REGION, BUT REPORTED ALSO IN THE PAST FEW DAYS IN THE REGION WHERE SOUTHERN GERMANY, THE CZECH REPUBLIC AND POLAND MEET. SO DISASTER REDUCTION AND RECOVERY, TOGETHER WITH INFORMED AND DETERMINED LEADERSHIP, WILL INCREASINGLY COME WITHIN THE AREA OF RESPONSIBILITY OF YOUR GREAT PROFESSION.

SINCE MY UNDERGRADUATE YEARS AS A MEDICAL STUDENT AT THE UNIVERSITY OF SYDNEY — AUSTRALIA'S OLDEST — I HAVE HELD THE FIRM BELIEF THAT ENGINEERS ARE THE NOBLEST OF ALL PROFESSIONAL GROUPS, INDIVIDUALS WHOSE METICULOUS, FOCUSSED AND DILIGENT COMMITMENT CONTRIBUTES MAXIMALLY TO THE PROGRESS OF CIVILISATION AND ALSO SAVES COUNTLESS LIVES. YOU WORK TO THE HIGHEST STANDARDS, NEVER WAITING TO BE PRAISED. I CONTINUE TO HOLD THAT BELIEF.

IN CONCLUSION MAY I WISH YOU ALL A MOST ENRICHING EXPERIENCE AT THIS CONFERENCE IN WHICH NEW FRIENDSHIPS WILL BE FORGED AND OLD ALLIANCES STRENGTHENED.

AND IT IS NOW WITH GREAT PLEASURE, THAT I DECLARE YOUR CONFERENCE OFFICIALLY OPEN.

THANK YOU ALL.

ATTACHMENT 2

CONFERENCE FINANCIAL SUMMARY

CECAR5 Financial Report

Income		
Item	Budget	Actual
Registration Fees	\$337,850.00	\$318,021.63
Sponsorship	\$214,284.46	\$221,068.00
Exhibition	\$36,500.00	\$33,150.00
Money Market	\$1,520.00	\$1,771.78
Administration - Finance	\$48,900.00	\$48,815.53
Total	\$663,765.46	\$622,826.94

Expenses		
Item	Budget	Actual
Venues	\$78,198.00	\$69,584.35
Technical Services	\$85,750.00	\$85,855.40
Staging	\$2,400.00	\$2,398.00
Delegate Catering	\$145,763.69	\$125,457.56
Program	\$16,406.00	\$15,797.30
Printing	\$48,599.00	\$44,632.65
Administration - General	\$19,000.00	\$14,117.41
Administration - Finance	\$62,282.57	\$48,195.07
Marketing & Promotion	\$36,414.06	\$33,446.26
Delegate Services	\$23,100.40	\$13,928.34
Local Organising Committee	\$8,000.00	\$7,693.84
Management Fees	\$68,114.00	\$68,966.80
Exhibition Costs	\$5,900.00	\$2,864.40
Total	\$599,927.72	\$532,937.38

Summary		
Total Income	\$663,765.46	\$622,826.94
Total Expenses	\$599,927.72	\$532,937.38
Expected Outcome	\$63,837.74	\$89,889.56
Additional income		\$28,292.50
Final distribution (\$AUD)		\$118,182.06
ACECC share 40% (\$AUD)		\$47,272.82

ATTACHMENT 3

ACECC PRESIDENTS' COMMUNIQUÉ