

World Congress on Engineering Asset Management (WCEAM 2010)

This Fifth World Congress continued the growing success of the World Congress on Engineering Asset Management (WCEAM), with over 326 delegates in attendance, including 85 from 22 overseas countries. It was held at the Brisbane Convention and Exhibition Centre from 25-27 October 2010.

This year's congress was jointly hosted by the International Society of Engineering Asset Management (ISEAM) and the Australian Green Infrastructure Council (AGIC), reflecting the emerging recognition and the importance of climate change and sustainability concerns in infrastructure asset planning and management.



Ted Scott, AM

The Congress opened with a "Welcome to Country" by Songwoman Maroochy, of the Turrbal people, the Traditional owners of Brisbane which was followed by words of welcome from the Chair of ISEAM, Prof Joe Mathew, the Chair of the Congress Co-hosts, AGIC, David Hood and Prof Ken Bowman of QUT, Principal Sponsor, Education and Research.

WCEAM 2010 was officially opened by the CIEAM Chair, Mr Ted Scott AM. The Hon Sterling Hinchliffe MP, Minister for Infrastructure and Planning, Queensland opened the combined

WCEAM-AGIC congress on Day 2 of the congress.

The format of the congress covered a wide range of topics.

The theme of WCEAM-AGIC 2010, "Engineering Asset Management and Infrastructure Sustainability", extended the asset lifecycle and a sustainable future theme of the 2009 congress in Greece. The management of engineering assets over its lifecycle, undergirded by sustainability principles is a crucial element for global business sustainability. Seven selected plenary speakers of world repute shared in their learnings and experiences in key topics of interest to participants of the congress. They were:-

- Professor Margot Weijnen Technical University of Delft, The Netherlands, "Whole Life Asset Management in interconnected infrastructure systems".
- Mr Des Pearson, Victorian Auditor General's Office, Australia, "Managing infrastructure assets: lessons from Australian public sector audit".
- Professor Roger Venables Chief Executive of CEEQUAL Ltd, UK, "The Influence of Sustainability Assessment & Awards Tools on Sustainability in Civil Engineering & the Public Realm".
- Dr Woobang Lee, Korea Hydro-Nuclear Power Company and EAM Forum, Korea, "Plant Asset Management Today and Tomorrow".
- Professor Michael Pecht Center for Advanced Life Cycle Engineering, USA, "Information Systems Safety and Availability – A New Time-Bomb".
- Professor Rhys Jones Monash University, Australia, "Predicting Short Crack Growth in Aircraft Alloys".
- Dr Greg Picker – AECOM, Australia, "National & State Policy Responses to Impacts of Climate Change: Insuring that Infrastructure is Climate Resilient"



Hon Stirling Hinchliffe, MP

This year's congress expanded on the number of workshops and forums that began in Greece. Led by eight convenors and co-convenors, the following workshops were held at the congress:

- Public Asset Management
- Infrastructure and Sustainability - Facing Climate Change Risk
- Structural Integrity & Material Behaviour at Micro & Nanoscales (SMMN 2010)
- From the Asset Management Perspective: Exploring Lessons Learned Implementing PHM and CBM+ across the Enterprise
- E-Learning for Engineering Asset Management
- Sustainable Operations & Maintenance of Critical Infrastructure Leveraging Open Standards based on Interoperability

At the government policy end of the spectrum, the Victorian State Auditor-General spoke of the emerging requirement to fully incorporate whole-of-life costs in the asset acquisition process.



Delegates at the Congress pre-dinner function. From left: John Pistak, Prof Joe Mathew, Dr Roger Lough, Prof Peter Andrews, Alan Johnston, Ted Scott, Margot Weijnen

At the technical end of the spectrum, presentations covered hydro-nuclear power generation in Korea, sustainability of public works projects in the UK, the detection and management of cracks in combat aircraft frames, problems in large scale inter connected infrastructure systems, and a red-alert on questions of reliability in electronic components in asset management systems.



Prof Peter Andrews, Qld Chief Scientist

In a special congress dinner address, Professor Peter Andrews, the Queensland Chief Scientist, presented a very rich interpretation of five principles of asset management he had gleaned from the conference agenda, applied to a range of broader issues being addressed by the Queensland Government.

Principal Sponsor Industry, Mainpac, through their CEO, Andrew Mason, also welcomed guests at the dinner

At the working level of the congress, sessions were run as a mixture of panel-led workshop discussions and submitted papers under specific topics.

These sessions were programmed in six parallel streams, covering the extraordinarily wide range of issues that impinge on the business of infrastructure and engineering asset management.

Naturally, many topics addressed were at the 'pointy end' of algorithm, software and system design. Others addressed broader management concerns, such as the perennial problem of 'silos' developing within the management structure of organisations, and the challenge of culture change to try to bring the various interest groups within an organisation into alignment to achieve a common purpose.

Several papers addressed risk management, in terms of physical risk from climate change or other sources, but also in terms of political and legal risk, including such concerns as the management of expectations by government, and the public at large.

In addition to the formal sessions, there were nine poster presentations available in the open area of the venue, for more leisurely perusal.

This varied format provided a good framework for discussion and interaction, including the opportunity to take ideas from one session to another.

The program for the congress is available in full detail on the WCEAM website at www.wceam.com.

Several asset management systems vendor companies as well as research institutions mounted exhibit booths in the open area of the congress venue. They were: QUT, Mainpac, Centric, Bentley Systems, Advanced Dynamics, Synengco, MEX, Springer-Verlag, AGIC and CIEAM.

An innovative voucher and validation system with a lottery style prize draw at the end of the congress, encouraged delegates to visit and interact with exhibitors. This process created some amusement, and appeared to have been quite effective in its purpose.



Prof Margot Weijnen



David Hood & Prof Joe Mathew

All this activity would not have been possible if not for the sponsors of WCEAM-AGIC 2010, who were: Principal Sponsors: Queensland University of Technology and Mainpac, Silver Sponsor: Queensland Transport and Main Roads, Function Sponsors: the Brisbane City Council, Bentley Systems, and Tenix, Satchel Sponsors: CIEAM, the Next Generation Infrastructures Foundation (NGInfra) and the Intelligent Maintenance Systems Centre (IMS), USA.

The proceedings of the congress will be published by Springer-Verlag early in 2011 while all presentations will be made available to Congress delegates on the www.wceam.com web site by December 2010.

Organisers: WCEAM-AGIC 2010 was organised by Prof Joe Mathew, CIEAM, Congress Chair, and Co-Chairs, Prof Margot Weijnen, NGInfra, Prof Jay Lee, IMS and David Hood, AGIC. The Chairs are indebted to the Chair of the Organising Committee, Prof Lin Ma, QUT and the members of the Organising Committee for their splendid effort in mounting a successful event.



Prof Lin Ma