



The 15th International Conference of Women Engineers and Scientists  
Adelaide Convention Centre  
Adelaide, South Australia



# ICWES15

## REPORT TO INWES BOARD

DR. MARLENE KANGA FIEAust CPEng  
Co-CHAIR, THE 15<sup>TH</sup> INTERNATIONAL CONFERENCE FOR WOMEN ENGINEERS AND  
SCIENTISTS (ICWES15)



# ICWEST 15

AUSTRALIA 2011

ADELAIDE 19-22 JULY

## Leadership, Innovation, Sustainability

The 15th International Conference of  
Women Engineers and Scientists

**Adelaide Convention Centre**

Adelaide, South Australia



ENGINEERS  
AUSTRALIA

# HOSTS: ENGINEERS AUSTRALIA

- ENGINEERS AUSTRALIA IS THE PEAK BODY FOR THE ENGINEERING PROFESSION IN AUSTRALIA WITH MORE THAN 97,000 MEMBERS
- WOMEN COMPRISE APPROXIMATELY 10.9 PERCENT OF MEMBERS
- TOTAL 10,641 FEMALE MEMBERS, AT JUNE 2011

# LOCATION AND VENUE

- *Dates:* July 20-22, 2011
- *Venue:* Adelaide Convention Centre, Adelaide Australia
- *Organiser:* Engineers Australia and INWES
- *ICWES15 Co Chairs:* Dr. Marlene Kanga and Ms. Ha Do
- *Theme:* **Leadership, Innovation and Sustainability**
- *APNN:* First Asia Pacific Nation network meeting held on Tuesday 19<sup>th</sup> July

# ICWES 15 ORGANISING COMMITTEE

- Dr Marlene Kanga, Director BT Risk Services and iOmniscient Pty. Ltd., Co-chair Organising Committee
- Ms Ha Do, Engineer, Hays Consulting, Co-chair Organising Committee
- Dr Rebecca Gravina, Senior Lecturer Civil Engineering, RMIT University, Co-chair Technical Committee
- A/Prof. Julie Mills, Program Director, Civil Engineering, University of South Australia, Co-chair Technical Committee
- Ms Gaye Francis, Director R2A Pty. Ltd, Treasurer
- Ms. Michelle Shi-Verdaasdonk, Women in Engineering National Committee Chair, Sponsorship Coordinator
- Ms Caroline Argent, Division Director, Engineers Australia SA
- Ms Catriona McAuliffe, Conference Manager, Engineers Australia
- Dr Emma Parkinson-Lawrence, Lecturer in Life Science, School of Pharmacy and Medical Sciences, University of South Australia (resigned October 2010 as now on maternity leave)
- Dr Sally Plush, Lecturer in Chemistry, School of Pharmacy and Medical Sciences, University of South Australia
- Dr Tara Pukala, Chemistry Lecturer, School of Chemistry & Physics, University of Adelaide
- A/Prof Ann Roberts, Deputy Head of School of Physics, The University of Melbourne



# ICWES 15 TECHNICAL PROGRAM COMMITTEE

- Julie Mills, University of South Australia (Co-Chair)
- Rebecca Gravina, RMIT University (Co-Chair)
- Gunilla Burrowes, University of Newcastle
- Margaret Jollands, Royal Melbourne Institute of Technology
- Sally Male, University of Western Australia
- Melissa Marinelli, Curtin University of Technology
- Dr. Sally Plush, University of South Australia
- Dr. Tara Pukala, University of Adelaide
- Pam Roberts, Australian National University
- Elizabeth Smith, University of South Australia
- Delene Weber, University of South Australia

# ADVISORY COMMITTEES

- **LOCAL ADVISORY COMMITTEE**

- The Hon. Trish White Member (former member for Taylor, SA), an engineers and a Fellow of Engineers Australia
- Professor Martin Lambert, School of Civil, Environmental and Mining Engineering, University of Adelaide
- Professor Tanya Monro, Director, Centre of Expertise in Photonics, University of Adelaide

- **INTERNATIONAL ADVISORY COMMITTEE**

- An International Advisory Committee with 23 members from round the world was established to review and select technical papers for the Conference

## OVERVIEW - 15<sup>th</sup> International Conference for Women Engineers and Scientists (ICWES15)

- First time this conference was held in the Southern Hemisphere
- Partner with International Network of Women Engineers and Scientists (INWES)
- Almost 300 abstracts from 30 countries
- Almost 600 delegates from 30 countries
- Major organisations and universities as sponsors, \$300,000 in sponsorship
- Supported by 7 major member organisations for science and engineering in Australia and NZ
- Supported by UNESCO – travel grants



# SPONSORS

Diamond Partner	
Platinum Partner	
Gold Partners	 
Silver Partners	 
Dinner Partner	 
Internet Café Partner	
"Future Minds" School Expo Partner	
Satchel and Lanyards Partner	
Industry Partners	   
International Travel Assistance Grants	
Government Partners	  
Media Partner	



# SUPPORTING MEMBER ORGANISATIONS

- Institute of Professional Engineers New Zealand (IPENZ)
- The Royal Society New Zealand
- FASTS (Federation of Australian Scientists and Technology Societies)
- WISENET (Women in Science and Engineering Network)
- Materials Australia
- Australian Institute of Project Management (AIPM)
- Australian Local Government Women's Association (ALGWA)

# KEY EVENTS

- Asia Pacific Nation Network Meeting – network with other women's groups across Asia, hosted by Korean women (KWSE)
- INWES AGM and Board meetings
- Scholarship program – supported by UNESCO
- Technical Site tours
- Training Workshops
- Future Minds Expo for High School Students

# HIGH PROFILE SPEAKERS

- Hon. Kate Ellis, Federal Minister for Status of Women
- Ms. Gay Thompson, MP South Australia
- Janet Holmes a Court – Chair John Holland Group AC
- Dame Jocelyn Bell Burnell DBE
- Emeritus Prof. Elizabeth Taylor AO
- Maria Laffargue, first woman President of WFEO
  
- CEO Circle:
  - Kathryn Fagg, Vice President Linfox Logistics
  - Kathy Hirschfeld, Board member, Snowy Hydro
  - Helen Gluer, CEO Stanwell Corporation Queensland
  - Karen Moses, COO, Origin Energy Limited

## OTHER HIGHLIGHTS

- Bernie Hobbs , science broadcaster, judge on The New Inventors, conference facilitator
- Invited speaker sessions with panel discussions:
  - Dr. Di McCarthy, CEO, Royal Society NZ
  - Dr. Cathy Foley, President FASTS
  - Prof Tanya Monro, Chair of Photonics and Director, CoEP
  - Sylvia Tulloch, Chair EcoQuest Ltd, Director DyeSol
  - Dr. Gretchen Kalonji, Head of Sciences, UNESCO
  - Ms. Kathy Hirschfeld, former GM BP, Company Director
  - Prof. Karen Reynolds, 2010 Professional Engineer of the Year
  - Melissa Mellen 2010 Telstra Businesswoman of the Year
  - Lorie Jones, Environmental Engineer
  - Sylvia Tulloch, Director, Dyesol Limited
- Leading women scientists and engineers from 25+ countries

# CONFERENCE PAPER THEMES

- Attracting, developing and retaining women engineers and scientists.
- Outstanding practice models of industry commitment to diversity and equality in the workplace.
- Achievements, innovations and research in the various fields of engineering, science and technology
- New ideas and solutions to contemporary problems including climate change, water, energy and sustainability

# SOCIAL EVENTS

- Opening Cocktail Party
  - Art Gallery of South Australia
- Gala Dinner:
  - Australian theme
  - MC - Jean Kitson, comedienne
  - Taik Oz – classical music drummers
  - “Fit for Work” – PPE for women – launch
  - Dance Band
- Poster Session
  - Opening by Ms. Gay Thompson Member of Parliament SA
  - Meet the authors of posters from around the world

# DELEGATE S

Country	State	Delegates	AP	Total
Algeria		1	0	1
Australia	(not specified)	19	0	19
Australia	ACT	5	0	5
Australia	New South Wales	65	1	66
Australia	Queensland	36	0	36
Australia	South Australia	68	1	69
Australia	Tasmania	4	0	4
Australia	Victoria	50	1	51
Australia	Western Australia	16	1	17
Bangladesh		1	0	1
Brazil		5	0	5
Canada		3	0	3
Congo		1	0	1
France		2	0	2
Germany		5	0	5
Ghana		7	0	7
India		5	0	5
Indonesia		5	0	5
Japan		12	0	12
Kenya		3	0	3
Korea		19	0	19
Malaysia		1	0	1
Mexico		1	0	1
New Zealand		10	0	10
Nigeria		43	1	44
Papua New Guinea		1	0	1
Senegal		1	0	1
South Africa		2	0	2
Spain		1	0	1
Taiwan		2	0	2
Uganda		1	0	1
United Kingdom		11	1	12
United States		23	3	26
		429	9	438



# TRAVEL AWARDS

- FUNDING – total 165 travel grants/ scholarships/ free attendance
  - ICWES15 Conference – 5 x A\$2,000 awards to delegates from developing countries
  - Engineers Australia WiE Committee – 5x500 awards to delegates from within Australia
  - Association of Korean Woman Scientists and Engineers (KWSE) – 33x US\$1,900 to delegates from Korea and developing countries
  - UNESCO – 7 x US\$3,000 for travel grants for delegates from developing countries
  - INWES – 5 x US\$3,000 travel grants for delegates from developing countries funded by UNESCO
  - 10 students from Korea attended APNN and Day 1 of ICWES15 at no cost
  - University students from Adelaide attended Day 3 at no cost (approx. 100)

# CONFERENCE PROGRAM

ICWES15 Preliminary Program					
Monday, 18 July 2011					
10:00 & 14:00	Pre Conference Site Tours				
Tuesday, 19 July 2011					
08:00-17:00	Registration Open				
08:30-17:00	Pre Conference Workshops				
09:00-16:00	INWES Asia and Pacific Nation Network Meeting				
09:30-16:00	Corporate Day				
10:00 & 14:00	Pre Conference Site Tours				
17:30-19:00	Welcome Reception				
Wednesday, 20 July 2011					
07:30-18:00	Registration Open				
09:00-09:45	Opening Speeches, Welcome to Country Sponsor				
09:45-10:30	Keynote Speaker 1: Dame Professor Jocelyn Bell Burnell				
10:30-11:00	Morning Tea & Posters - within the exhibition				
11:00-11:45	Keynote Speaker 2: Dr. Maria Jesus Prieto-Laffargue				
11:45-12:30	Parallel Sessions for Streams				
	Leadership	Gender Equity / Workforce	Innovation / Sustainability / Technical Research	Innovation / Sustainability / Technical Research	Entrepreneurship
	Invited Speaker: Gretchen Kalonji, then 1 Paper	Paper Session	Paper Session	Paper Session	Paper Session
12:30-13:30	Lunch & Posters - within the exhibition				
13:30-15:00	Parallel Sessions for Streams				
	Gender Equity / Diversity	Innovation / Sustainability / Technical Research	Higher Education	Innovation / Sustainability / Technical Research	Workshop 1: Moving Towards a Future with Appropriate Technology
	Invited Speaker Dr Cathy Foley, then 3 Papers	Paper Session	Paper Session	Paper Session	
15:00-15:30	Afternoon Tea & Posters - within the exhibition				
15:30-17:00	Parallel Sessions for Streams				
	Sustainability	Leadership	Industry Best Practice	Innovation/Sust/Tech Research	Workshop 2 = 18: Training Material for WIE Attraction, Retention and Higher Management Development
	Invited Speaker Sylvia Tulloch, then 3 Papers	Paper Session	Paper Session	Paper Session	
17:00-18:00	Poster Session				
Thursday, 21 July 2011					
08:00-17:00	Registration Open				
08:45-09:45	Sponsor & Keynote Speaker 3: Janet Holmes a'Court				
09:45-10:30	Parallel Sessions for Streams				
	Innovation	Higher Education	Mentoring	Innovation / Sustainability / Technical Research	Innovation / Sustainability / Technical Research
	Invited Speakers Professor Tanya Monro and Professor Karen Reynolds	Paper Session	Paper Session	Paper Session	Paper Session
10:30-11:00	Morning Tea & Posters - within the exhibition				
11:00-12:30	CEO Circle - Helen Guer, Kathy Hirschfield, Kathryn Fagg and Karen Moses				
12:30-13:30	Lunch & Posters - within the exhibition				
13:30-15:00	Parallel Sessions for Streams				
	Workforce Challenges	K-12 Education	Economic Impacts on Womens Opportunities	Technical: Structural / Buildings	Workshop 3: Making Change Stickl - Systems for Sustaining Change
	Invited Speaker Kathy Hirschfeld then 3 Papers	Paper Session	Paper Session	Paper Session	
15:00-15:30	Afternoon Tea & Posters - within the exhibition				
15:30-17:00	Parallel Sessions for Streams				
	Gender Equity / Diversity	Innovation / Sustainability / Technical Research	Women in Academia	INWES AGM	Workshop 4: Local Government
	Invited Speaker Dr. Di McCarthy then 3 Papers	Paper Session	Paper Session		
19:00-23:00	Gala Dinner				
Friday, 22 July 2011					
08:00-16:00	Registration Open				
08:45-09:45	Sponsor & Keynote Speaker 4: Emeritus Professor Elizabeth Taylor, AO				
09:45-10:30	Parallel Sessions for Streams				
	Leadership	Gender Equity / Workforce	Innovation / Sustainability / Technical Research	Innovation / Sustainability / Technical Research	Innovation / Sustainability / Technical Research
	Invited Speaker Melissa Mellen, then 1 Paper	Paper Session	Paper Session	Paper Session	Paper Session
10:30 - 11:00	Morning Tea & Posters - within the exhibition				
11:00-12:30	Parallel Sessions for Streams				
	Innovation and Sustainability	Gender Equity / Workforce	K-12 Education	Innovation / Sustainability / Technical Research	Workshop 5: Women Professional Engineers at Work
	Invited Speaker Lorie Jones, then 3 Papers	Paper Session	Paper Session	Paper Session	
12:30 - 13:30	Lunch & Posters - within the exhibition				
13:30-15:00	Parallel Sessions for Streams				
	Future Minds High School Expo	Gender Equity / Workforce	Gender Equity / Workforce	Innovation / Sustainability / Technical Research	Workshop 6: Kaizen a New You
		Paper Session	Paper Session	Paper Session	
15:00 - 15:30	Conference Close - Prizes Presented				

# INWES VISIBILITY DURING ICWES15

- All INWES Board members invited to SA Governor's Reception

- Facilitated Asia Pacific Nation Network meeting with KWSE, presentation summaries in Program Book

— Prof Kong Joo Lee

- Ms. Sue Bird

- Dr. Myung Hee Jung, KWSE

— Ms. Gail Mattson

- SWE launches ICWES16 at Closing ceremony

- INWES Booth in Exhibition Hall

- INWES Awards presented at Gala dinner



**WEBSITE: [www.icwes15.org](http://www.icwes15.org)**

- Key conference information
  - Committees
  - Speakers
  - Program
  - Registration
  - Accommodation
  - Tourism
  - Etc
- 
- **MEDIA COVERAGE** – National and International
    - Support from Australian Science Media Centre

## FINANCIALS

Total Registrations	\$ 319,930
Total Sponsor and Exhibitor Income	\$ 290,271
Other Income	\$ 27,132
Total Income	\$ 637,333
 Total Expenses	 \$ 555,310
Surplus	\$ 82,023

Allocation calculations for INWES:

Per MoU with INWES	Surplus	INWES Share
10% OF FIRST \$10,000	\$ 10,000.00	\$ 1,000.00
20% OF NEXT \$20,000	\$ 20,000.00	\$ 4,000.00
30% OF BALANCE	\$ 52,023.00	\$ 15,606.90
Total Surplus	\$ 82,023.00	\$ 20,606.90

INWES Share of Surplus and SEED Funding of A\$5,133 paid to INWES, January 2012.

# CONFERENCE EVALUATION

- Good Points:
  - Attendance by Federal and State Ministers for Women
  - High media profile, reporting in newspapers and national radio
  - Strong international presence, 300 delegates from overseas
  - Good speakers from plenary sessions
  - Excellent papers – technical and gender sessions
  - Large numbers of posters
  - Great support from volunteers
  - Good balance of engineers and scientists on committees and for papers
  - Excellent networking opportunities
  - Good technical site visits
  - Training and development opportunities
  - APNN launched
  - Social events showcasing the best of Adelaide and Australia

## CONFERENCE EVALUATION – SCOPE FOR IMPROVEMENT FOR FUTURE EVENTS

- Difficulty in getting funding approval from UNESCO and final payments
- Non attendance by a small number of recipients of travel grants, loss of funding
- Problems with some travel award recipients arriving early and requiring more accommodation costs and difficulties with reconciling expenses
- Problems with reimbursing air-fares to some countries, additional costs incurred
- Delays in visa approvals requiring intervention from Australia



The 15th International Conference of Women Engineers and Scientists  
**Adelaide Convention Centre**  
Adelaide, South Australia



A very memorable and important conference for Australia which will be remembered for many years.

Many corporations show-cased their diversity programs at this conference and this has increased the importance of support for women in STEM Professions in Australia.

The INWES APNN was launched at this Conference and has gone on to support women in STEM in many other countries in the Asia Pacific.

