



The Australasian Association for Engineering
Education

NEWSLETTER

June 2012

Matthew Joordens, Editor

President's Report, 2012

I hope you enjoyed a relaxing and enjoyable festive season and are looking forward to an exciting and prosperous 2012. It is with great pleasure that I take up the role as President of AAEE for 2012. I'd like to thank the Association members for electing me as its President and I hope that I can do the position justice. I undertake to give it the dedication, energy and commitment it deserves. AAEE represents a vibrant community passionate about engineering education mainly in Australia and New Zealand. My term follows on from Duncan Campbell, now immediate past president, and many other Presidents and Executive members who have also led and contributed to engineering education with passion and energy. I acknowledge and applaud their contribution to the community, and thank Duncan for his leadership in 2011. We bid farewell to Euan Lindsay after many years of service and scholarship brought to AAEE. Euan was the Chair of the AAEE 2011 Conference in Perth and is a member of the IFEEES Executive. On behalf of the community, I thank Euan for his valued contribution and I am sure we will see him from time to time assisting with special projects. We welcome Matthew Joordens to the AAEE Executive. Matthew is Associate Head of School (T&L) Engineering at Deakin University. Matthew's research interest includes robotics and embedded systems and is also known for his scholarship and passion in engineering education, and I know he will bring much to the community.

There are a number of key initiatives in the planning for 2012 aimed at continuously improving AAEE value to Australian and NZ Council of Engineering Deans and the engineering education community nationally and internationally. A number of these initiatives build on projects started in 2011. Initiatives planned include:

Increase AAEE identity and communication both within our membership and within our member institutions through AAEE Champions. The AAEE Champions are contact points for members or prospective members in each sponsoring university. The AAEE Champions will provide key dissemination points for AAEE, and assist in raising the awareness of AAEE, promote professional development and benefits for the community. A "LinkedIn" group has been set up as a professional community forum for AAEE Champions. This is not to replace the formal email channel of communications, but to provide an additional collaborative and supportive environment;

Increase our relationships and exposure in South East Asia. A number of Australian universities also have good links with SE Asian universities through individual academics or offshore campuses and a number of Deans attend AAEE Conference. It is proposed that AAEE community develop closer links with select communities and invite them to participate in professional development workshops and the AAEE Annual Conference.; and

Develop strategies to increase the impact and recognition of engineering education scholarship and scholarly publication. It is worth noting that several universities across Australia have resourced engineering education research groups.

Reconnect with associate Deans Teaching and Learning. The AAEE executive feels it is important to formalize an agreement with ADTL's in order for this group to better connect to the engineering education community. It is proposed a formalised Associate Deans' T&L meeting at the end of the AAEE conference could discuss the outcomes and educational research

developments and that this time could be far better utilised to assist in helping the useful research outcomes of the conference enter into practice, and help common issues of participating universities.

I firmly believe that, driven by the passion of this Executive, we will set a very solid platform for the future of engineering education in Australasia.

In closing, it is with great pleasure that I introduce to you your AAEE Executive for 2012.

Les Dawes - President (l.dawes@qut.edu.au)

Lyn Brodie – Vice President and Awards (brodie@usq.edu.au)

Gerard Rowe - Treasurer (gb.rowe@auckland.ac.nz)

Colin Kestell - Web page (colin.kestell@adelaide.edu.au)

Leslie Jolly - ERM (ljolly@bigpond.net.au)

Matthew Joordens – Newsletter (matthew.joordens@deakin.edu.au)

Llewelyn Mann - Member (LMANN@groupwise.swin.edu.au)

Duncan Campbell - Past President (da.campbell@qut.edu.au)

Frank Bullen - ACED Representative (bullen@usq.edu.au)

David McCarthy - Committee Administrator (DMcCarthy@engineersaustralia.org.au)

Prue Howard - Journal Editor (p.howard@cqu.edu.au)

Peter Hoffmann– Engineers Australia Representative (phoffmann@engineersaustralia.org.au)



Les Dawes
2012 President

2012 AAEE Conference



23rd Annual AAEE Conference 3rd – 5th December 2012

<http://www.aaee.com.au/conferences/2012/>
Call for Participation

Colleagues,

On behalf of the conference organising committee, I would like to invite you to participate in the 2012 Annual Conference of the Australasian Association for Engineering Education (AAEE). This year the conference will be held from Monday 3rd to Wednesday 5th December, with a welcome reception on Sunday 2nd December.

The conference will be held at **Swinburne University of Technology** in Melbourne, Australia in the recently opened \$140M 5-star green rated Advanced Technologies Centre (ATC). The AAEE Award Ball will be held in the Olympic Room that overlooks the hallowed turf of the Melbourne Cricket Ground (MCG).

This year's theme, **The Profession of Engineering Education: Advancing Teaching, Research and Careers** will explore opportunities for improving teaching and scholarship, rigorous research in engineering education and career advancement as an engineering educator. More information on the theme and sub-themes can be found [here](#).

The conference will be accepting a range of submission categories, which include Peer Reviewed Full Papers, active Workshops and Symposia on topical issues. Further details of each type can be found [here](#).

We have also introduced a number of **innovations** to the conference, with the full support of the AAEE Executive:

To help all authors with the quality of their papers, we have switched to using **Structured Abstracts (the template can be found [here](#))**. NOTE: Authors are required to submit a Structured Abstract and will receive detailed and professional feedback before they submit a Full Paper.

This extra step will mean that authors will receive constructive feedback at an early stage before writing their full paper. For extra help, we've also created a 'Writing the AAEE 2012 Structured Abstract' guide.

To strengthen the quality of the review process, we have introduced a **new 3-step paper handling process**. To make the review process transparent and equitable for all authors, we will be adopting **new review criteria** developed by a panel of national and international experts. These will be available shortly.

We have also included a focus on professional development throughout the conference, mainly in the form of **Master Classes** run by experts on various topics in teaching and research. The

Conference Committee and the AAEE Executive Committee both feel that these innovations will result in advancing engineering education as profession and practice.

Structured Abstracts (required for full papers) are due 15th June with Draft Full Papers due 3rd August. Submissions are made through the 2012 AAEE Easychair website ([here](#)).

Further information about the conference activities, including details of a post-conference day workshop on rigorous research in engineering education, will be released in the coming months. If you would like to receive regular updates, please register your interest [here](#).

We look forward to seeing you in Melbourne in December.

Dr Llew Mann
AAEE 2012 Conference Chair
lmann@swin.edu.au

Feature Article

CLOSING THE LOOP: GOOD PRACTICE TO GOOD RESEARCH TO GOOD PRACTICE

It has been observed through papers submitted to engineering education conferences and journals, such as the AAEE conferences and the Australasian Journal of Engineering Education, that many authors are not well-read in the domain knowledge, research and best practice. Such submissions are rejected on this basis which are opportunities lost in terms of impact in terms of research outcomes, and education practice. The purpose of this proposal is to make practitioners more aware of what research already exists, how to present their own work as research that will be recognised by DIISR metrics and finally how to apply the results of research to their teaching. It will be offered to both engineering and IT departments. Closing the Loop projects at interested universities will work through individual contact and workshops to

- Identify interested academics and their needs
- Explore opportunities for collaboration with educationalists and others outside engineering
- Introduce appropriate research training as necessary

Begin to develop implementation plans to embed research results in teaching and curricula

The project will centre on two workshops to be offered across Australia and New Zealand. One will be entitled "Moving into Engineering Education Research" where the collaboration of an Education Faculty academic or other relevant expertise will be sought. The second workshop will build on the needs and partnerships identified in the first workshop, and would be entitled "Implementing Educational Research Findings". It is envisaged that participants at the first workshop will also attend the second and vice versa but this is not mandatory.

The project will also have a direct research dimension in that it would provide information about the state of knowledge of education theories and methodologies in current staff and seek to explore why there appears to be so little uptake of research findings. Any results produced can then be recycled back to

the continuing revitalisation of engineering courses.

Nature of collaboration and partners

We are well aware that expertise exists in many engineering and IT faculties around the country and that any move to embed the findings of educational research has to pay close attention to local norms and conditions.

The role of The Australasian Association for Engineering Education will be to identify universities where there is interest in the issue of making better use of research findings, to provide expertise for the workshops and manage the organisation of them. Participating faculties will be expected to advertise the workshops and encourage participation, help with identification of suitable collaborators such as Education faculty, provide a room for workshops and some refreshment during workshops.

Description of project methodology and plan / schedule

Phase 1: Identifying participants. Contact will be made with all engineering faculties through the Associate Deans (Teaching and Learning) and the AAEE Champions . The first three faculties to express firm interest will be selected as participants. At this time potential collaborators from Education faculties will also be identified where possible.

Phase 2: First workshop "Moving into Engineering Education Research". AAEE will work with local education and engineering education experts to develop this workshop according to local need. Each site will have its own particular emphasis, but in general the aims of this workshop will be to:

Identify local interests and expertise in engineering education

Introduce the norms and vocabulary of educational research

Identify local research opportunities and discuss potential approaches

Phase 3: Second workshop "Implementing Educational Research Findings". While the first workshop focusses on how to carry out and appreciate educational research, the second 'closes the loop' by exploring how to make use of research results in actual teaching. The conditions of implementation can be expected to vary widely from institution to institution and workshop facilitators will draw on the experience of the first workshop to adapt the second one to local conditions. A series of case studies will be presented to guide participants through the process of identifying what they need to do locally to embed best practice and to begin to develop action plans

to do so. The general aims of this workshop will be to:

Identify and prioritise potential implementations

Identify opportunities and impediments to desired implementations

Develop outline of action plan for implementation

Faculties can nominate to have either half-day or full-day workshops. Attendees will be charged a nominal fee to minimise the likelihood of RSVPs who later do not attend.

Evaluation

At this stage the program for this series of workshops is necessarily vague since we intend to identify and work to local needs and capacities. To make sure we know just what has worked for whom, the project will include a formal evaluation using a program logic methodology and to be undertaken by Dr Lesley Jolly in close co-operation with presenters and participating universities.

Project outcomes and next steps

The outcomes from this project are as follows: Better understanding of how to read and conduct educational research in engineering faculties leading to

Higher number of papers in engineering education meeting DIISR metrics

Better understanding of the uses of educational research

Increased implementation of best practice strategies in engineering education

The next steps from this project will result from what it discovers about the processes of implementing teaching and learning strategies based on research results. The AAEE facilitators will undertake to obtain ethical clearance to gather data on this subject during the workshops and use it as the basis of feedback to the AAEE community through publications and a workshop at the next AAEE Conference. The aim of this feedback will be to help other faculties address the issue of how to implement best practice.

Budgeted expenditure

As noted above, participating universities will be asked to advertise the workshops and provide rooms and catering. Attendees will be charged at the rate of \$25.00 each, with a minimum cost to the university per workshop of \$250 and a maximum of \$500.

If you are interested in pursuing this project please contact:

Dr Lesley Jolly

ERM Group Chair, AAEE Executive

ljolly@bigpond.net.au

Expression of Interest to Host 2014 & 2015 AAEE Conference

The Australasian Association for Engineering Education (AAEE) conducts annual conferences throughout Australia and New Zealand aimed at promoting scholarship in engineering education and facilitating the dissemination of research and best practice throughout the engineering education community. Great emphasis is placed on the importance of the conferences in achieving this goal, hence the association has a responsibility to ensure that each hosting institution is aware of the high expectations which go with the granting of host status. Decisions on where to hold the Annual Conference will be made at a meeting of the AAEE Executive. Universities interested in hosting the conference in 2014 or 2015 should prepare an Expression of Interest (EOI) as per the following guidelines and forward it to the AAEE Executive Officer. The AAEE executive will then invite universities with successful EOIs to submit a formal bid.

For enquiries and submissions, please contact:

David McCarthy
Executive Officer, Learned Society

Groups

Engineers Australia
Tel: (02) 6270 6530
Fax: (02) 6273 2358
Mobile: 0409 383 620
E-mail:

DMcCarthy@engineersaustralia.org.au

Guidelines for an Expression of Interest to Host an AAEE Conference

Institutional Support: The AAEE executive needs to ensure that there is sufficient institutional support for the successful planning, conduct and management of the annual AAEE conference.

The institutional support that will be provided if successful should be described in the EOI. The EOI should also contain the written support of the Dean of Engineering (or equivalent).

Proposed Organising Committee: Details of the proposed General Chair for the conference and other members of the organising committee

should be included (a minimum of 3 people in addition to the chair are required at this stage).

The General Chair and other proposed committee members should be members of AAEE. Any previous experience in organising conferences among the proposed committee members should also be included.

Venue Details: An outline of the proposed venue, including the benefits of hosting the conference at that venue is required.

Proposed Theme: The proposed theme for the conference should be included at this stage. This may change in the full bid if the EOI is successful.

Agreement of Conditions for Hosting an AAEE Conference: A statement of agreement to each of the conditions outlined below is required.

Conditions for Hosting an AAEE Conference
The Organising Committee will follow the AAEE paper handling process, including the double-blind review of papers, the use of the AAEE paper review criteria and ensure the quality of the review process.

The Organising Committee will ensure that an appropriate publication of conference proceedings will take place with an ISBN. The conference will be held in early December of the proposed year.

The successful hosts will provide a business plan for the conference to the AAEE Executive, including a sufficiently detailed budget in the lead up to the conference.

Details of who will underwrite the conference must be provided. AAEE will not underwrite the conference.

The conference website will be located at www.aaee.com.au/conferences/YEAR/. AAEE will be paid a capitation fee per delegate of \$60.

An agreement that Copyright ownership of all published material remains with the authors. The Awards dinner will be part of the conference and included in the full registration.

2012 International CDIO Conference



"New Generations" in Engineering Education 1-4 July, Brisbane, Australia (4 weeks to go)

On behalf of the local organising committee and the Queensland University of Technology, I warmly invite you to the 2012 International CDIO Conference to be held in Brisbane, Australia. This year's conference is themed "New Generations", which celebrates and explores the challenges and opportunities in generational diversity of our academic/faculty members, our students in their engineering programs and industry connections. The international CDIO conferences attract and enjoy rich international participation with over 100 papers to be presented at this 8th International CDIO Conference.

We are also hosting the student competition based CDIO Academy with applications still open (but not for much longer).

Internationally recognised engineering

education leader Professor Robin King will be delivering the keynote speech, "Global Trends and Challenges in Engineering Education".

It is a very busy time of year in Brisbane with many large sporting events and accommodation difficult to secure if left too late. I highly recommend that you register and make travel arrangements as soon as possible.

For further information, please visit the conference website <http://www.cdio2012.com>.

I look forward to welcoming you in Brisbane for this 8th CDIO International Conference.

*Duncan Campbell
Conference Chair*

Winter School 2012

Noosa North Shore, 2- 6 July 2012

This year's Winter School is open to academics and higher degree students who are interested in improving their educational research skills. Participants are invited from both Engineering and IT disciplines. You can find a link to this year's agenda [here](#). The School is an intensive residential one with little to no internet connectivity, so few distractions. AAEE meet all accommodation costs but there is a charge of \$250.00 per head to cover catering. You

just need to get yourself to Brisbane airport on 2 July and the rest is done for you. If you would like to know more or receive a registration form please contact Lesley Jolly on ljolly@bigpond.net.au.

(Note: The winter school 2012 is now fully booked)

*Lesley Jolly
AAEE Executive and Winter School Convenor*

What's good and bad about a career in engineering education?

Engineering education is currently emerging as a valid academic career with practitioners choosing engineering education, rather than a

technical area as their research specialisation. However, as with all emerging disciplines, engineering education does not yet enjoy the

same prestige and recognition as technical specialities in most Australian universities. The position is slightly better in the UK and USA where there are specialised centres of engineering education within faculties. This lack of recognition is likely to create problems for academics, especially newer academics, in constructing a successful and enjoyable career.

We are beginning some research into how people who teach engineering grapple with this situation. By asking what helps and what hinders job satisfaction for engineering educators we hope to open debate about what

might be done to support academics who choose this career path and to learn from the successful strategies of existing practitioners. If you have been involved in any ASEE activities recently you will probably get an email from us soon asking you to complete a short survey (15 minutes). If not, please go straight to the survey at: <https://www.surveymonkey.com/s/X3JMQ3H> and share your experience with us.

*Lesley Jolly
ASEE Executive*

Contributions for the ASEE Newsletter

Do you have something of interest to the Engineering Education community? We welcome contributions from members! If you have something to share, please email the newsletter editor Matthew Joordens at matthew.joordens@deakin.edu.au

Matthew Joordens
