Message from the Chair

I hope everyone has been having a great start to the new year. This is the first newsletter for 2017 and the committee has been working behind the scenes to try and bring activities of interest to the members. Many of our activities are based on what has worked well previously. However, we would like to do more, so please if you have some great ideas please pass them on.

Sasha Nikolic

Are you a sessional/casual teacher that wants to help others and earn $50?

The 3rd Annual Casual Teacher Forum will be held at the University Technology Sydney in early July (date to be confirmed). We are calling for presenters from all NSW universities to attend and share their ideas and best practice. A $50 gift voucher will be provided to those that are selected to present.

Casual teachers undertake a significant amount of teaching at the university level. It has been recognised that casual teachers do not get enough opportunity to develop their skills and share their experiences.

The casual teacher forum provides an opportunity for casuals to meet away from their supervisors and subject coordinators to share ideas and best practice. If you have something to share and would like to participate please send an email to sasha[at]uow.edu.au outlining the topic and the key concepts of the presentation.

There are two types of presentations:

- **Standard** will be limited to 8 minutes and follow with 3-5 minutes of questions. These presentations will be entitled to a $50 gift voucher (must be an IEEE member) Non-members can still present.

- Discussion will be a 2 minute introduction to a topic that will then lead to a 10 minute debate or discussion with the audience.

Expressions of interest should be submitted by the close of business 1st of May 2017.

Some examples of previous presentations include:

- Promoting Innovative Problem Solving in the Engineering Laboratory
- Relationship with Students: how to create a better learning environment
- Open discussion - Marking and how to detect plagiarism
- Open discussion - How to manage the balance between teaching and research

Discussion will be a 2 minute introduction to a topic that will then lead to a 10 minute debate or discussion with the audience.

Expressions of interest should be submitted by the close of business 1st of May 2017.

Some examples of previous presentations include:

- Promoting Innovative Problem Solving in the Engineering Laboratory
- Relationship with Students: how to create a better learning environment
- Open discussion - Marking and how to detect plagiarism
- Open discussion - How to manage the balance between teaching and research
Can you help school teachers implement classroom activities?

IEEE - Teacher In-Service Program (TISP) known as TSSP in NSW is a support network for primary and secondary school teachers. Volunteers work with teachers and attend conferences to showcase valuable lesson plans that help teach engineering and computing.

Engineering lesson plans can be found at: http://tryengineering.org/

Computing lesson plans can be found at: http://www.trycomputing.org/

In 2016 the TISP attended the following conferences:

- ACT Canberra Mathematics Association annual conference
- Institute of Industrial Arts Technology Education

In 2017 the team has so far participated at:

- Science Teachers Association of New South Wales Conference

If you can help, please email Graeme to join the team and help with future events: gb.gwilliam@ieee.org

$400 Rebate for an IEEE Education Society Conference

Are you a PhD student, ECR or non-academic member looking to attend an engineering education conference?

The NSW chapter is serious in promoting the benefits of engineering education to the next generation of academics. If you are an IEEE Education Society member and a PhD student, an Early Career Researcher (within 3 years of obtaining a PhD) or non-academic member we are offering one $500 rebate to attend one of two IEEE Education Conferences—either Frontiers in Education or TALE in 2017.

For more information or to apply please see the application form

$400 Rebate for AAEE Winter School 2017

Are you an IEEE Education Society member and a PhD student, ECR or non-academic (university) staff member that would like to develop their knowledge in engineering education research? With the NSW chapter alliance with AAEE, providing one $400 rebate to attend the Winter School at UTS, 10-14 July

Attendees will learn about: Designing and undertaking effective education research projects; Evaluating teaching and curriculum; Positioning evaluation and research activities in light of current trends; Appreciating and responding to national and local grant opportunities; Building collaborative research partnerships across Australia and beyond; plus more

For more information or to apply please see the application form
Why Education Research?

Q: Why should you care about education research?

I have heard many conversations about the conflicting nature between publishing papers in journals and teaching. In the argument surrounding conflicting time constraints, one area that many academics forget is educational research. With careful planning, the time and effort you put into the classroom to provide that exceptional engineering education experience, can be transformed into world class research. Alternatively the research of others can help transform your teaching with less effort, with many proven ideas ready for you to take advantage of.
TALE 2016—Our Regional IEEE Conference

IEEE TALE2016 was held 7-8 December 2016 at the Dusit Thani Bangkok Hotel, Bangkok, Thailand

TALE2016 held in Bangkok was attended by about 90 people from across the world. The size of the conference meant that you had the time and opportunity to network and build strong relationships. Participants were provided the opportunity to experience Thai culture. Some of the papers presented included:

- The relationships between ICT use and life quality among children with social phobia. [Link](#)
- Facilitating student and staff engagement across multiple offshore campuses for transnational education using an immersive video augmented learning platform. [Link](#)
- The use of an Arduino pocket lab to increase motivation in Electrical engineering students for programming. [Link](#)
- Senior students as peer-teachers in laboratory classes: Impacts and insights. [Link](#)

Upcoming Education Conferences

EDUCON2017 25-28 April 2017, Athens, Greece

Frontiers In Education
October 18-21, 2017
Indianapolis, Indiana, USA

ICL2017
27-29 September 2017, Budapest, Hungary

ASCILITE 2017: 34th International Conference on Innovation, Practice and Research in the Use of Educational Technologies in Tertiary Education
Toowoomba from 4 – 6 December 2017

28th Australian Association for Engineering Education Conference (AAEE2017)
10-13 December, Manly, Sydney
Chapter Goals

The committee tried to achieve all goals in 2016. New goals have been set for the 2017 year. Your contribution can help us achieve them.

Members:
At the start of every year we have a drop in membership due to the IEEE membership renewals cut off date. We start the new year with 34 members and hope to reach a new peak of 40 members by the end of the year.

LinkedIn:
We missed our target of reaching 60 members last year. Member activity has also been limited. At the end of the year we will consider if LinkedIn is the best way forward. Please add articles of interest.

Activities:
Most activities are still in the planning stage. In early July we will repeat the casual teacher forum and we will also repeat an online session with an editor from an engineering education journal. We welcome more ideas.

---

Chapter Goals

2016 Goals (Achievements last year)

Reach 40 members by Dec 2016

- 2014 - 28 members
- 2015 - 36 members
- 2016 - 38 members

Encourage member contributions

- At least one distinguished lecture: We had a lecture by Jeff Froyd, Editor of IEEE ToE
- At least two technical meetings: We had 3 technical and 1 general meeting
- Fund a rebate to an IEEE Education Society Conference: One person sent to IEEE FIE
- Fund a rebate to AAEE Winter School on Engineering Education: Not taken up
- Reach 60 members in our LinkedIn group: We reached 57 members

2017 Goals (This year)

Increase chapter members

- Reach 40 members by Dec 2017

Grow group membership to LinkedIn group

- Reach 65 members by Dec 2017

Encourage member engagement

- At least one distinguished lecture
- At least two technical meetings
- Fund a rebate to an IEEE Education Society Conference
- Fund a rebate to AAEE Winter School on Engineering Education

Making the local chapter work more for you

The committee would really like to bring value to your Education Society membership. To do this we need your help in formulating ideas that we can implement. Therefore, if you have any ideas please let us know what they are. You can provide anonymous feedback here: https://www.surveymonkey.com/r/EdSocIdeas2016
Combining a collaborative learning framework with an e-learning tool to improve learning and professional development in blended learning environments

**Future Technologies Conference, Keith Willey**

**Abstract**

This demonstration reports applying research in learning dispositions, orientations, agency, identity and collaborative learning to develop a suite of online software tools and resources. These tools have been specifically designed to assist educators to help students take advantage of the affordances of blended learning environments as well recognize, plan and manage the ongoing learning opportunities provided within their professional practice.

**Keywords**

flipped/blended learning, collaborative learning, professional development

**Building apostrophe power: lessons learnt for serious games development**


There is increasing interest in the application of serious games for learning. Growth in the take-up of digital devices, e.g. smartphones and tablets, and their use for gaming provides new opportunities for mobile learning (m-learning). A serious game m-learning app for improving adult learners' apostrophe usage, called Apostrophe Power, has been developed. The research team, which consisted of software engineers and educationalists, encountered a number of discipline spanning issues while designing and developing this m-learning app.

This paper overviews the issues encountered, the recommendations from recent literature and how the issues were ultimately addressed, exemplified in a case study. These lessons learnt offer insight for serious game development and highlight practical solutions for m-learning apps involving interdisciplinary teams.
Project-based learning is a widely used pedagogical strategy in engineering education shown to be effective in fostering problem-solving, design, and teamwork skills. There are distinct benefits to be gained from giving students autonomy in determining the nature and scope of the projects that they wish to undertake, but a lack of expert guidance and of a clear direction at the outset can result in confusion, frustration, and unfulfilled goals. Moreover, engineering schools face the imperative of providing students with opportunities to engage with industry during their courses, which can be difficult to accomplish due to logistical and time constraints. This paper reports on a case study in which undergraduate students of electrical, computer, mechatronics, and telecommunications engineering interacted with representatives from industry to obtain feedback at the inception phase of their design projects. Students pitched their ideas to the industry guests at a virtual “trade fair” held within a hybrid video conferencing and three-dimensional (3-D) virtual world environment, in preparation for the assessable pitches that they had to deliver on campus to a faculty audience. Survey and assessment results attest to the participants’ satisfaction as well as to the effectiveness of the approach in improving student self-efficacy and performance. The paper concludes with recommendations for engineering educators looking to implement similar initiatives and a brief outline of the authors’ plans for the future.

Link

More Resources

To get access to more resources in regards to engineering education, and educational research please visit the [chapters website](https://www.ieee.org).