

media release

The Advertiser Electronics Graduate of the Year Award

(Electronics Industry Annual Excellence Awards, presented Friday night 3rd November, Sebel Playford Hotel, on North Terrace, Adelaide)

Last Friday during the Electronics Industry Association (EIA) annual gala dinner, newly elected EIA President Peter Charlesworth presented the **electronics industry Excellence Awards**.

The final award presented on the night went to some of the newest people in the industry. This award was introduced last year and was created to recognise the **Electronics Graduate of the Year**.

Judges were so impressed with two of the nominations that the award was split in a dead heat between the top two finalists this year. Judges were unable to find anything to separate these two outstanding candidates. Jason Turner from Redarc and David Blockow from Tenix Defence were awarded joint **Advertiser Electronics Graduates of the Year**.

Jason has been working at Redarc for less than 12 months after graduating from Flinders University with a Computer Systems Engineering degree. One of Jason's most valuable contributions to Redarc has been some project work that has never been attempted in Australia before. This has involved the design, development and implementation of an interface device which allows an automated manual truck transmission to communicate and function in a vehicle fitted with a manual transmission. Jason presented a working prototype and then supplied the customer with some custom made tools to fine tune the prototype.

The other winning graduate – David Blockow has shone in the area of tracking systems in his role as Graduate Engineer at Tenix Defence. David joined Tenix after completing a Bachelor of Maths and Computer Science degree at Adelaide University almost three years ago. Since then David has been the engineer primarily responsible for the design and development of tracking systems and multiple projects including target tracking using an electro-optic camera stabilised on an unmanned aerial vehicle; networking of ship borne radar systems and sensor networking of heterogeneous sensors for surveillance work.

EIA President, Peter Charlesworth said that the standard of award applicants was outstanding across all categories this year. "Individuals and companies who applied for awards this year demonstrate that the electronics industry is burgeoning with talented individuals and companies that have the market savvy to succeed in tough overseas markets," said Mr Charlesworth.

Mr Charlesworth added that the EIA has created fact sheets to inform students, parents and Career Counsellors about the benefits of a career in South Australia's booming electronics industry. The one page fact sheets cover topics such as salary levels, what to study, employment categories, company profiles and much more.

Mr Charlesworth added that many students and teachers are simply unaware of the size and scope of the electronics industry in South Australia. "It employs twice as many people as the wine industry, has more than 400 companies in South Australia and employs about 12,000 people."

“Due to the rapid growth of the electronics industry in South Australia and around the world there is a shortage of skilled people. Not only does an electronics career offer great pay, travel and interesting work but also the important peace of mind that comes with job security and being able to find work,” added Mr Charlesworth.

Mr Charlesworth said that teachers and students who would like a fact sheets should contact the EIA by phoning 08-8272 5222 or by emailing Jayne Osborne on josborne@eiaa.asn.au, or go to the EIA website to read find out more about electronics careers, or go to the EIA website at www.eiaa.asn.au

Judging Criteria for The Advertiser Electronics Engineer Graduate of the Year Award

1. Reaching / exceeding objectives in all areas
2. Corporate ambassador / product champion
3. Assimilation into corporate environment
4. Quantifiable achievements
5. Respect of peers and superiors
6. Measurable impact of achievements on the electronics industry and or company

Contact Details:

Media comment:

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Summary of Winners & contact details:

The Advertiser Electronics Engineer Graduate of the Year: Jason Turner, 81865633 engineering@redarc.com.au
AND David Blockow, 8300 4782 david.blockow@tenix.com

Each year the EIA also gives an award to the best student at each tertiary institution and these are the winners and their contact details

These are the details about what projects each student worked on:

Adelaide University Student Winners

Mr David Fairlie-Jones and Mr Zhining Lim

"Clock Tree Insertion" - aimed to develop a software tool that improves the distribution of an integrated circuit's clock signal. The tool was intended to assist existing place and route tools within the tool chain of the project's industrial sponsor.

The primary aim of clock signal distribution was to deliver the clock signal to every clocked cell such that it arrives at each cell as close to simultaneously as possible. This was done by creating a clock tree, that is, a network of buffer cells that balance the path length and load on each clocked path. Other objectives for the network were maintaining the signal shape and limiting the overall time taken to deliver the signal to the clocked cells.

TAFE SA – Torrens Valley Campus Student Winner

Mr Vus Andrushenko

“Automation Ignition Controller” – is a distributor-less ignition system that replaces the conventional distributor in cars and allows you to program the advance curve you believe best suits your engine.

By having the ability to vary the advance curve, this allows you to get the most from an engine and suit it to different fuels, for example LPG and petrol with different octane levels.

The system uses a PIC 16f84 processor that receives inputs from three hall effect sensors, where it determines the revolutions per minute of the engine and ignites the ignition coils at the appropriate time as per the program set by the user, by using dual output coils and the wasted spark method two coils are all that are necessary for a four cylinder engine.

**University of South Australia Winner
Mr Guy Morris**

“A Study of Electromagnetic Interference between a Phased Array Radar and Electronic Support Antennas on a Maritime Platform” - The aim of the project was to detail a technique for the Computational Electromagnetic Modelling (CEM) of antenna's onboard a maritime platform using the Uniform Theory of Diffraction and the Reciprocity Theorem for antennas.

A destroyer class warship, generic phased array radar (common to this class of ship) and generic Electronic Support antennas were used as the examples of the maritime platform and onboard antenna systems. The CEM tool FEKO and MATLAB were used for the production and analysis of data.

**Flinders University Winners
Mr Travis Bessell & Mr Matthew Randell**

Development of a ZigBee Based universal remote console for home appliances - This project involved the development of a ZigBee-based Universal Remote Console that has the ability to control all household appliances, with universal design principles included to allow operation by anyone.

The remote control was based on a commercially available personal digital assistant, which featured universal design principles such as switch scanning, high contrast dynamic buttons as well as audible output capability. This included the design of a function graphical interface, full ZigBee communication and a ZigBee to Infrared conversion technique to control current appliances. The ZigBee remote control, including all wireless transceivers, were developed in less than a year and was demonstrated controlling lights, TV and DVD player at a University Open Day.

**TAFE SA Regency Campus Student Winner
Mr Andrew Moser**

“Honey Extractor Automation System” -

Andrew's project is entitled Honey Extractor Automation System and here is a brief description:

The system is designed to increase the extracting efficiency of a honey extractor. It is based on the measurement of the centrifugal force by a strain gauge sensor applied on the honey frames. The measurement is sent over a wireless link using a purpose designed protocol to a microcontroller which then controls the speed of the motor. The system has a user interface which allows fine tuning and manual settings if needed.

The prototype was tested in a simulated environment and it is now implemented in the actual extractor in Mildura, at the Moser and Hinks honey business.