

# **President's Report 2015**

## **Australasian Society for General Relativity and Gravitation**

### **AIP Council 2014 and 2015**

I represented ASGRG at the AIP's council meeting (28-29 Jan 2014 University of Melbourne and 2-3 Feb 2015 Australian Synchrotron). I have attached my 2014 report but in 2015 I presented an oral report. In that report I made just two points. First, I thanked the AIP for giving us the opportunity to present talks at their congress (AIP 7-11 Dec 2014 ANU). I also conveyed our concerns over the breakdown in communications regarding the choice of an ASGRG approved plenary speaker for that congress. I did acknowledge that as we are not a full member of the AIP we can not complain too loudly when things do not go our way (after all they pay for the speaker on our behalf, this is generous of the AIP and not something we should treat as a right). No feathers were ruffled and assurances were given that this would not happen again.

### **AIP Congress 2014**

This was held at the ANU from 7-11 Dec 2014. One parallel session was devoted to general relativity and there were a total of 14 talks. Unfortunately only 5 of the speakers were ASGRG members (as best as I could tell). We need to do the best we can to wave the flag for general relativity and that means taking every opportunity we can to spread the good word. I encourage all members to seek out conferences throughout 2016 & 2017 and to make some noise. Our signal is weak and our detection rates are too low but the information content is significant. We can and will do better.

### **AIP Congress 2016**

The next AIP congress will be held at the Brisbane Convention Centre over 4-8 Dec 2016. I would very much like to see a strong contingent from our society at that conference. We have ample time to get our talks ready. Let's make this a big show.

On that point, we have been asked by the AIP to nominate a suitable plenary speaker for that congress. We need to provide them with a name as soon as possible. We have missed the requested date but I have e-mailed them to advise that we are currently finalising our choice of speaker.

### **Web site**

As you may have noticed we now have our own domain name ([www.asgrg.org](http://www.asgrg.org)) and a very basic web page has been cobbled together. This is the first step in re-building our web presence. The web pages will be the primary point of contact for anybody interested in general relativity in our region. We need to build on what we have and I welcome suggestions. In particular I think we need to provide some kind of members showcase. For example, scholarships, postgraduate projects, out reach material. We need to make our web site a kind of honey pot for anybody interested in general relativity and most importantly for potential post-graduate students.

## Prizes

Congratulations to Michael Tobar who has received two prestigious awards,

- The 2014 Clunies-Ross award by the Australian Academy of Technological Sciences and Engineering
- The 2014 W.G. Cady Award by the IEEE Society of Frequency Control.

## Proposal for CoE

Susan Scott has kindly provided the following information on an exciting proposal for an ARC funded Center of Excellence.

*Members of ACIGA (The Australian Consortium for Interferometric Gravitational-wave Astronomy) are currently preparing a full proposal for a Centre of Excellence CoE entitled "ARC Centre of Excellence for Gravitational Wave Discovery. The proposal is due at the ARC on 16 December.*

*ACIGA has made 4 previous applications for CoEs, at intervals of several years, but we have never made it through the first round before. So this has been a long haul! On this occasion we have made the first cut from a total of 120 expressions of interest to 20 finalists. From this point there is an approximately 50% chance of success as there will be 10 new Centres (a few of these may be renewals of existing Centres). So this is a very exciting time.*

*Quite a number of our members of ASGRG are involved in the bid as Chief Investigators CIs: David Blair, Ju Li, David McClelland, Andrew Melatos, Susan Scott, Daniel Shaddock, Bram Slagmolen, Eric Thrane, Peter Veitch, Chunnong Zhao. Paul Lasky will also be involved. The leader (Director of the CoE) of our proposal is Matthew Bailes from Swinburne. Our Deputy Director will be David McClelland from ANU. The nodes of our CoE are Swinburne, Monash Univ and Univ of Melbourne (in Melbourne), Univ of Adelaide, Aust Nat Univ and Univ of Western Australia.*

*The proposal incorporates research in all areas of gravitational wave detection and gravitational wave astronomy for both ground based and space based projects. Experimental design and technology development, detector characterisation, gravitational wave data analysis, pulsar timing, theory, supercomputing and data handling are all involved.*

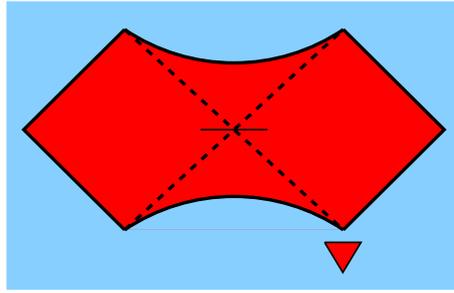
*The future timeline is not pinned down as yet, but it is thought that CoE interviews will occur in March and outcomes will be announced by the ARC in May. The new Centres will begin operation in 2017 for 5 years with a possibility to extend for a further 2 years. Stay tuned on this exciting development!*

I can not think of a better group of people to run this show, good luck!



Leo Brewin  
President  
ASGRG

3-Dec-2015



## 2013 Report

### Australasian Society for General Relativity and Gravitation

#### Office bearers

<b>President</b>	Leo Brewin (Monash)
<b>Secretary</b>	Malcolm Anderson (Brunei)
<b>Treasurer</b>	John Steele (UNSW)
<b>Ordinary members</b>	Susan Scott, David Wiltshire, Paul Lasky and Bram Slagmolen

#### Activities

##### ACGRG7 and AGM

The Society's biennial conference and AGM was held at Hamilton Island over three days, 8-11 Dec 2013. The conference was organised by Professor Daniel Shaddock (ANU) with support from Professor Susan Scott (ANU). This is our Society's principal activity and it caters for all aspects of General Relativity and Gravitation, in particular experimental and theoretical developments in the field. There were no poster sessions and, as is our practise, all postgraduate students were given a chance to present a paper.

There were 34 papers presented at the conference, including 6 plenary speakers,

<b>David Parkinson (Queensland)</b>	<i>Watching galaxies fall: structure formation in the universe as a probe of gravity.</i>
<b>Rana Adhikari (Caltech)</b>	<i>Wideband, next-generation, gravitational-wave antenna.</i>
<b>Sheila Rowan (Glasgow)</b>	<i>Status and plans for advanced gravitational wave detectors.</i>
<b>Edward Teo (Singapore)</b>	<i>The Plebanski-Demianski solution: space-time prototype D.</i>
<b>Manuel Tiglio (Maryland)</b>	<i>Reduced Order Modelling in General Relativity.</i>
<b>Ryan Shannon (CSIRO)</b>	<i>Characterising the Supermassive Black Hole Population with Gravitational Waves and Pulsar Timing Arrays.</i>

and 5 invited talks

<b>Kazuaki Kuroda (Tokyo)</b>	<i>KAGRA Status.</i>
<b>Krzysztof Bolejko (Sydney)</b>	<i>Curvature of the Universe.</i>
<b>Stefan Danilishin (UWA)</b>	<i>Need for speed: shall the 3rd generation gravitational wave interferometer be a speedometer and if so, which species of it?</i>
<b>David Ottaway (Adelaide)</b>	<i>New Cavity Topologies for Beating Thermal Noise in Third Generation GW Detectors.</i>
<b>Matt Visser (Wellington)</b>	<i>Classical and quantum flux energy conditions.</i>

The next conference will be hosted by Monash University in Melbourne 2015.

### **The Kerr Prize**

This prize is awarded to the best talk by a postgraduate student during our biennial conference. This year the award was shared by two students,

**Valentina Bacetti** (Wellington)  
**Andrew Wade** (ANU)

### **The Centenary of General Relativity**

In Dec 2015 the General Theory of Relativity will score its first century. This will be an important moment and our Society has begun plans to mark the occasion with a number of professional and community events. The exact details are yet to be decided.

### **Membership**

Membership of the society remains steady at 62 members (comprised of 48 life members, 11 ordinary members and 3 student members).