

Inspiring young Australians since 1984



NATIONAL YOUTH  
SCIENCE FORUM



Founding  
Partner

# 2014 Annual Report

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  /NYSFoz

**30+ years.  
21 Rotary Districts.  
National program.  
10,000 Alumni.  
So much to  
celebrate in 2014.**

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Sandra Meek/Amanda Caldwell unless otherwise noted

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## Contents

- 2 | From the Chair
- 3 | From the Director
- 5 | What is the National Youth Science Forum?
- 7 | The NYSF Supporting Programs
- 9 | National Science Summer School Council (NSSSC)
- 11 | Why is science important?
- 13 | Our Partners
- 16 | NYSF in 2013 – The year in review
- 20 | Program Reports
- 30 | Alumni Testimonials



NYSF Chair, Dr Craig Cormick with Rotary District Liaison Officer, Rob Woolley (centre) and students at the Science Dinner, Session C, NYSF 2014

## From the Chair

Do you know that game you play where you all stand in a long line and then all turn to the side and then reach out and pat each other on the back? Well everyone who has ever been involved in the National Youth Science Forum should consider standing in such a line and reaching out to pat whoever is standing near them.

The NYSF has been delivering quality programs now for 30 years and has over 10,000 alumni around the country (and increasingly around the world). By my estimates, if we all stood in a line, including Rotary partners, and staff and all the other helpers who have been involved in the program the line would stretch over 12 kilometres.

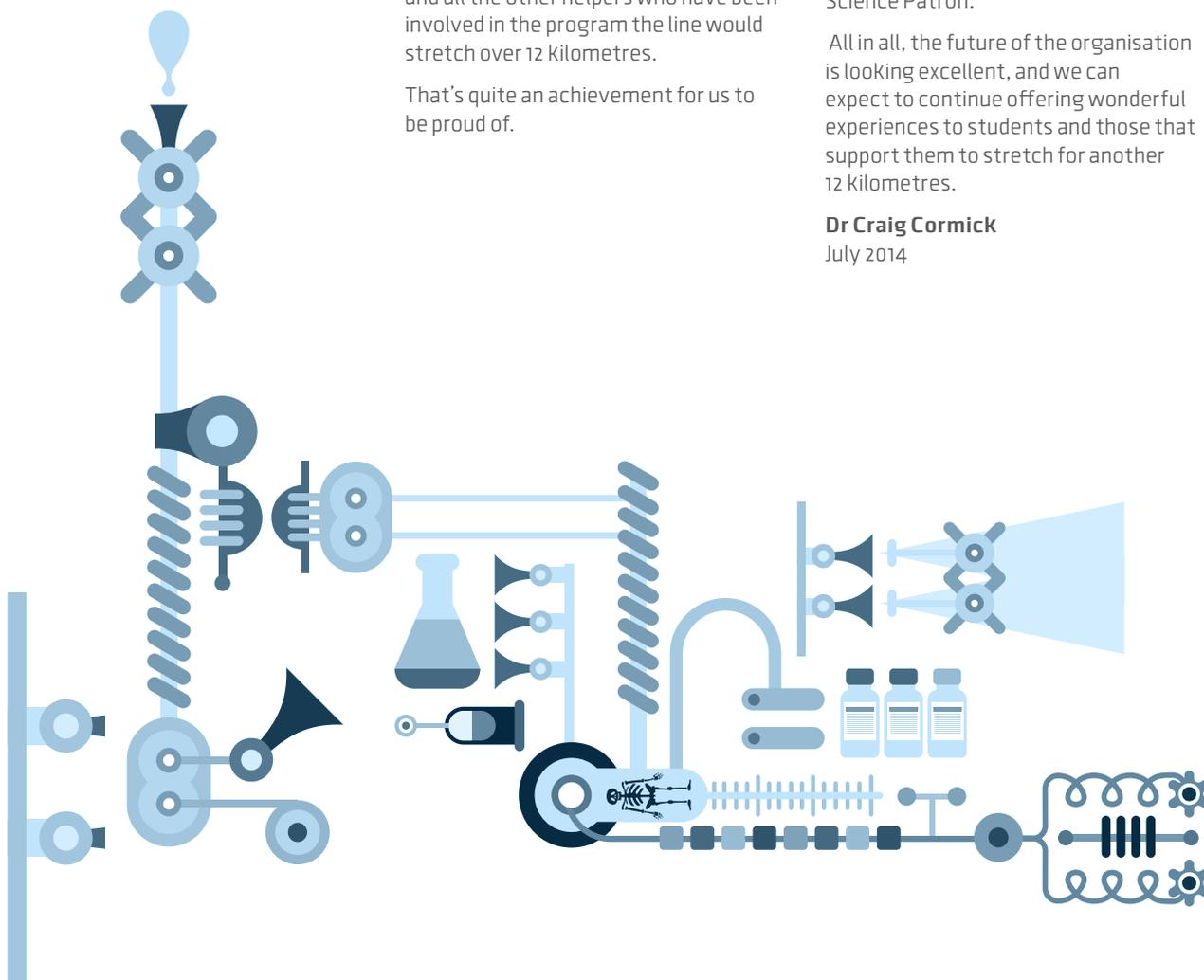
That's quite an achievement for us to be proud of.

And as we reach the mid-year point and look back at the successes of the 2014 program and what we have learned for next year's program I think we can say we are going to have as great a 2015, with also excellent speakers and program activities for participants.

On administrative matters the Council and Executive, with great support by the Corporate Team, have been progressing with a review of the Constitution and consolidating many of the ancillary programs. We have also had the new Governor General Sir Peter Cosgrove commit to being the Patron of the NYSF and Australia's Chief Scientist, Ian Chubb will be taking up the new role of Science Patron.

All in all, the future of the organisation is looking excellent, and we can expect to continue offering wonderful experiences to students and those that support them to stretch for another 12 kilometres.

**Dr Craig Cormick**  
July 2014



## From the Director

It is with great pleasure that I present the Director's Report for 2013-2014, 30 years after the National Youth Science Forum's (NYSF) foundation. I came to this role in July last year, and have found it to be both personally and professionally rewarding, offering many opportunities to build on the knowledge and experience I gained working as Associate Director for the previous two years, during the January Sessions.

I would like to start off by acknowledging the commitment and dedication of the NYSF's Council, the corporate team and the student staff cohort. The NYSF exists to provide young people with opportunities to make informed choices about what science, engineering and technology offers them for future study and career opportunities. However, this would not be possible without the extraordinary efforts of those individuals working largely behind the scenes throughout the year to organise and facilitate these experiences.

Once again in January, the students who participated were able to visit laboratories and research facilities that are not usually open to the public. They were able to learn about different career paths and study options, and consider their futures in light of this information. And they began to form professional networks that our alumni tell us last well into their university and future working lives.

The restructure of the corporate operations within the last reporting period allowed us to develop and consolidate administration processes and program management models. This has resulted in increased efficiencies, improved reporting mechanisms, and as a consequence, financial savings across the organisation. In this regard, it is worth noting that the income received by the NYSF comes, in



equal proportions, from our corporate and university partners, contributions from the parents or caregivers of students, and through the sponsorship of students from Rotary Clubs.

During May, the NYSF corporate team met with the Rotary NYSF District Chairs (DC) in Melbourne – a bi-annual opportunity for us to share knowledge and explore ideas that can contribute to the smoother running of the program. The Rotary Liaison officer to the NYSF, Mr Rob Woolley, chaired the meeting and the key outcome of the weekend included strategies for improving communication of information to the Rotary DCs, as well as facilitating dialogue between DCs.

We were also delighted this year to be involved in the development and publication of *Australia's Future*, which features the stories of 28 young people and the science, technology, engineering and maths (STEM) study and career paths that have taken them from school to university and into the work place. The book was the result of a collaboration among some of the STEM programs and advocacy groups in Australia and provided a valuable opportunity for us to pool resources, tell a collective story, and illustrate to young people and their families the relevance of STEM study in a range of careers.

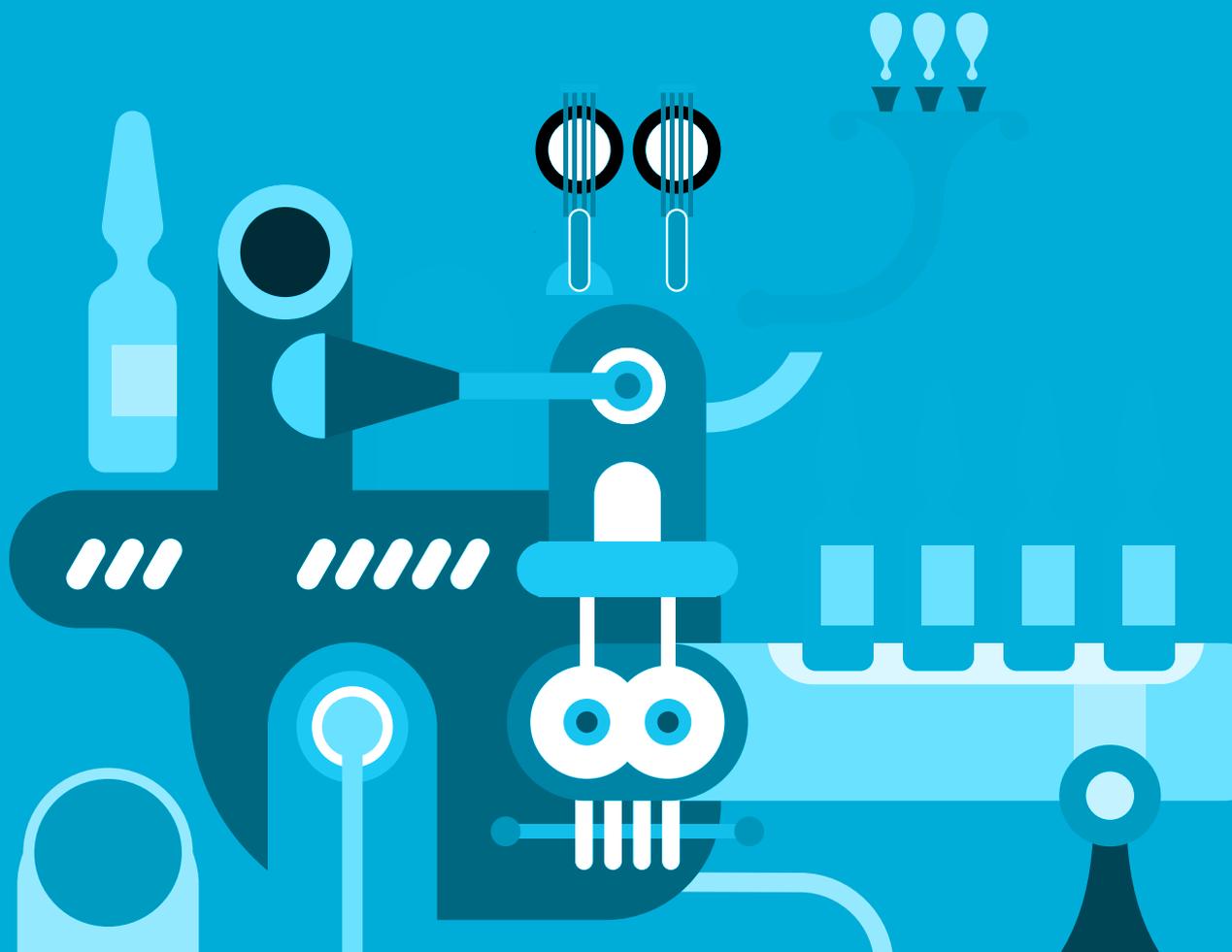
The NYSF made the very tough decision this year to discontinue its third session in Perth in 2015. The program had run for the past five years in Western Australia in conjunction with and through funding provided by university partners The University of Western Australia and Curtin University we thank them for their support. However, without the funding or in-kind support from these partners, it is not possible for the third session to run. However, through the support provided by the Australian National University, we have absorbed some 80 extra places at the two Canberra sessions, resulting in an outcome that we believe is acceptable. We are exploring options for re-instating the third session of the NYSF in an alternate location in the future, to provide a different view of the world and its options for our participants.

Whatever the coming year holds, I am certain that the program will continue to be exciting and rewarding for the young people who take up the challenge of participating, and for those of us fortunate enough to support their development.

**Damien Pearce**  
 July 2014

**“At the NYSF, I was exposed to so many different degrees and careers I never considered before.”**

Chloe Philp, NYSF 2014



## I. What is the National Youth Science Forum?

After more than thirty years of operation, the National Youth Science Forum (NYSF) is a national organisation that offers a suite of programs, all of which are designed to develop and support the engagement of Year 12 students on to prospective vocation, study and employment opportunities within science, engineering and technology.

NYSF's mission is to provide an environment for community minded, academically well-rounded incoming Year 12 students, who have an interest in science, engineering and technology, to make informed decisions about future study and career options within a collaborative professional and social environment with like-minded peers.

The NYSF enjoys and values high-level support in the Australian community.

Additionally, the NYSF is supported by a significant number of sponsors and partners including Rotary – its founding partner.

Corporate organisations, universities, private and federally funded public research organisations, and state governments also support the NYSF.

The NYSF January Sessions held in Canberra are hosted by the Australian National University (ANU). From 2010–2014, with support from the University of Western Australia (UWA) and Curtin University (CU), the program was extended to include a third session in Perth.

Almost 10,000 young Australians have taken part in the NYSF program since 1984.



His Excellency General the Honourable Sir Peter Cosgrove AK MC (Retd), Governor-General of the Commonwealth of Australia is the Patron of the National Youth Science Forum.

Professor Ian Chubb AC, the Chief Scientist for Australia, is the Science Patron of the National Youth Science Forum..



Ms Maureen Manning, Rotary District Governor 9710

NYSF students from the Canberra District, with the member for Canberra, Ms Gai Brodtmann (left) who welcomed the students on Session C 2014 to Parliament House, and Damien Pearce, Director, NYSF



## What are the benefits of the NYSF?

A recent independent survey of NYSF Alumni indicated that:

- The NYSF had a significant impact on study choices and expanded options for professional development.
- Alumni cite that science teachers and family members are highly influential in the encouragement of pursuing careers in science, engineering and technology.
- The NYSF strengthened participants' interest and commitment to careers within science, engineering and technology.
- Alumni have higher success rates in applying for undergraduate scholarships compared to the national average.
- Completion rates for Alumni for undergraduate and post-graduate study are higher than the national average.
- The Group of Eight (Go8) institutions dominate in terms on Alumni choices for enrolment for both undergraduate and post-graduate degrees (including MBBS – Bachelor of Medicine, Bachelor of Surgery).

- Alumni almost exclusively pursue their first undergraduate degree in Australia. International destinations are popular for subsequent degrees (particularly Europe).
- Alumni have embarked on successful professional careers covering the wide sphere of research and development, which includes management, business and education.
- The participants highlighted the relationship with all of NYSF's partners: corporate, education, research organisation and government, as important as it influenced the study choices and helped to inform decision-making.
- The Alumni indicated a strong interest in reunions and social events, particularly where the focus of these events could extend learning in others and younger people.
- The most memorable part of the NYSF was the opportunity to meet like-minded peers.

## How are NYSF Students selected?

Applications for the NYSF open on 1 April and close on 31 May each year.

Students in Year 11 who are interested in science, technology and/or engineering, and who are also involved in their community and undertake other extracurricular activities, are encouraged to apply for the following year's January Sessions.

Students are selected based not just on their academic achievements, but also on their other interests and their social and communication skills. In the January NYSF sessions, and throughout their NYSF experience, these young people will acquire additional skills that will allow them to take their place in society as tomorrow's leaders.

Applications are processed via the student's local Rotary club, which decides whether to endorse them to the Rotary District selections for the NYSF. Positions are competitive, and Rotary District NYSF Committees conduct an extensive selection process to determine who will succeed in gaining a place at the NYSF residential program the following January. Students are often supported by Rotary clubs in their fundraising activities to cover the cost of attending NYSF programs.



## The NYSF Supporting Programs

**The NYSF also conducts other programs that support or extend the NYSF's core objectives.**

These programs include:

- The Next Step Program
- NYSF Student Staff Leadership Program
- National Science Teachers' Summer School
- NYSF International Program
- Indigenous Youth Science Forum
- Youth Science Forum

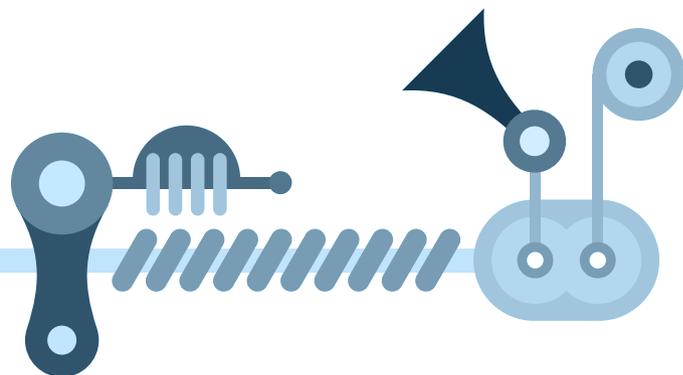
### Next Step Program

From March to July each year, the NYSF offers a program of events across Australia for students who have participated in the January Sessions. These programs are conducted in close collaboration with many of Australia's leading universities, and our partners from the corporate sector and research organisations. The programs are designed specifically for NYSF students, to extend and develop their knowledge of courses, facilities, scholarships and accommodation on the different campuses. Leading industries provide in-house workshops and tours of facilities and exposure to current research that is not generally accessible to the public. Students from the January Sessions are encouraged to participate in as many of these Next Step events as possible throughout the year.

### NYSF Student Staff Leadership Program

True to the focus on youth and leadership development, the January Sessions are facilitated by past NYSF students who have been specially selected for the task. All have successfully completed the NYSF-organised leadership development program. This includes a workshop in the April school holidays, known as ANZAC because of when it is held. Here they learn, understand and develop what is required to be a student staff member. Based on the ANZAC ideology, this program covers topics such as personal resilience, logistics, group development, personal wellbeing, time management, taking responsibility for actions, and other considerations required to facilitate the safe and successful January Sessions.

This training weekend is followed by a trek experience that helps participants to develop awareness and social connection and to gain an understanding of individual and group values, development of supporting and trusting relationships, and the opportunity to critically reflect on their own performance and the performance of others within a shared leadership approach. This program is unique because the new student staff members are identified and selected by the student staff members – their peers, from the previous January Sessions. This represents the youth stewardship of the NYSF as a current, meaningful, and legitimate development opportunity, by youth for youth.



## National Science Teachers' Summer School

The week-long National Science Teachers' Summer School (NSTSS) is conducted by the NYSF in collaboration with the Australian Science Teachers Association (ASTA). The NSTSS caters for 45 primary and high school science teachers from across Australia who have a record of achievement towards innovative, contemporary and student centred approaches to science and technology teaching and learning. Additionally, when selecting the participants, the candidates' aptitude for educational leadership is considered.

The NSTSS is held at the ANU and coincides with the second week of the first NYSF January Sessions. The NSTSS provides the opportunity for the teachers to engage with scientists, research facilities and cutting-edge technologies that are not widely available in school environments. Teachers are also engaged in workshops and discussions about teaching, learning and assessment in the science classroom.

Participation in the NSTSS provides science teachers with an opportunity to re-invigorate their enthusiasm and interest in the many facets of science and science teaching. The program's aim is to strengthen their science and science education knowledge, and increase their awareness of tools to enhance teaching practices.

## NYSF International Program

The NYSF has affiliations with a number of well-established youth science programs operating internationally in places such as Canada, Germany, South Africa, United States and the United Kingdom. Students attending the January Sessions apply to attend one of these international experiences in the same year they attend the NYSF.

The NYSF International Program acknowledges the importance of cultural and scholarly exchange in an increasingly globalised world where innovation requires the successful exploration of new ideas, new techniques, processes and commodities.

The NYSF currently provides the opportunity to fill approximately 40 international positions to represent the NYSF and the future of Australian science, engineering and technology.

## Indigenous Youth Science Forum

The NYSF recognises the challenges faced by Indigenous Australians and in 2011 initiated the Indigenous Youth Science Forum (IYSF) as a developmental opportunity for indigenous Year 10 and 11 students from Western Australia. The program was designed for Indigenous young people in WA to gain exposure to the study and career opportunities within science, engineering and technology. The program is an abridged version of the January Sessions and has been held in Perth during the October school holidays. During the IYSF, students who are identified as leaders within their peer group are invited back as mentors for the following year. Additionally, at least two exceptional students are identified from the cohort and selected to receive a scholarship to attend one of the January Sessions.



The IYSF has been under review since October 2013, particularly in relation to the relevance of the program's education content for students from the areas selected, and the effectiveness of the program in encouraging students to apply to the NYSF through the normal channels.

## Youth Science Forum

Due to limited places at NYSF January Sessions, not all of the well-rounded science students from across Australia, who are recommended through the NYSF selection process, are able to attend NYSF January sessions. Under the auspices of the NYSF, those students who are not invited to attend the January sessions are offered the opportunity to attend a program similar to the NYSF hosted in other locations. Consistent with the mission of the NYSF, these programs provide community minded, incoming Year 12, well-rounded students who have an interest in science, engineering and technology to be offered the opportunity to make informed decisions about future careers and study within a collaborative professional and social environment with like-minded peers.



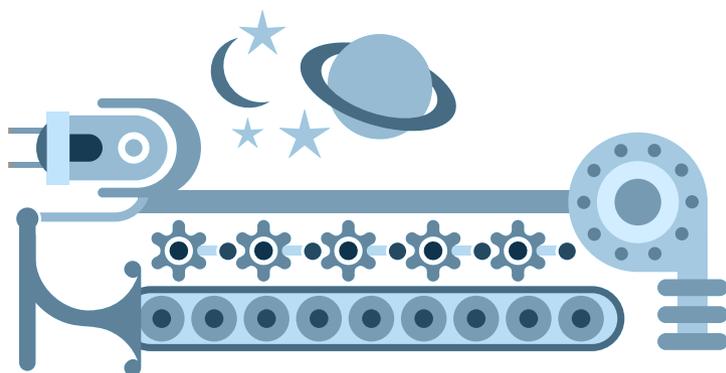
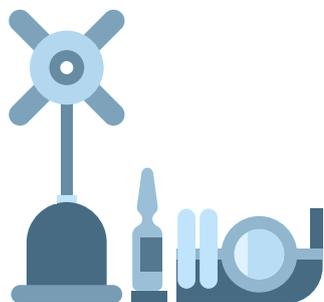
## National Science Summer School Council (NSSSC)

The Council was established under the Constitution of the National Science Summer School Incorporated to oversee the management and operation of the National Youth Science Forum, its programs, and the NYSF Student Staff Leadership Program.

The membership consists of representatives of the major scientific organisations in the ACT, namely, one nominee of:

- Australian Academy of Science
- Australian Academy of Technological Sciences and Engineering
- The Australian National University
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- District Governor, Rotary International, District 9710
- Rotary International Institute and Zone 1
- the major sponsoring organisation of the National Science Summer School for the current year as determined by the Committee

In addition, up to five other persons can be elected for a period ending at the conclusion of the next Annual General Meeting.



Membership of the National Science Summer School Council at July 2014:

### Patron

[His Excellency General the Honourable Sir Peter Cosgrove AK MC \(Retd\)](#)  
Governor-General of Australia

### Science Patron

[Professor Ian Chubb AC](#)  
Chief Scientist for Australia

### NSSS Council Members

Chair

[Dr Craig Cormick](#)

Director

[Mr Damien Pearce](#)

Secretary

[Mr Ian Sayers \(resigned August 2013\)](#),  
[Mr Adam de Totth \(appointed August 2013\)](#)

Treasurer

[Mr Michael Pedler](#)

CSIRO representative

[Dr Lyn Hinds](#)

Rotary Liaison Officer

[Mr Robert Woolley](#)

Industry representative

[Mr Neil Young \(resigned August 2013\)](#)

Australian Academy of Science representative

[Dr Elizabeth Truswell \(resigned May 2014\)](#),  
[Professor Jenny Groves \(appointed May 2014\)](#)

ATSE representative

[Professor Robin Stanton](#)

ANU representative

[Professor Tim Senden](#)

Rotary District Governor 9710

[Ms Maureen Manning](#)

University Representative

[Professor Jo Ward \(resigned May 2014\)](#)



**“Being a young man from the small town of Taree, I don’t get exposed to a lot of science. My eyes have been opened to new opportunities and I now have both the tools and the passion to get me there.”**

Timothy Gilchrist, NYSF 2014

**“The NYSF is a place where you can find out who you really are ... the enthusiasm and like-minded nature of every person at the NYSF allows us to flourish in an explosion of wicked intelligence and wonderful memories. The NYSF is the perfect beginning for the scientists of the future.”**

Amber Pacholski, NYSF 2014



## 2. Why is science important?

**In May 2014, the Chief Scientist for Australia, Professor Ian Chubb, gave the keynote address for the Australian Academy of Technological Sciences and Engineering (ATSE) Clunies Ross Awards.<sup>1</sup>**

During the address, Professor Chubb spoke of Sir Ian Clunies Ross' significant impact on Australian science, calling him "An Australian giant of science," and saying that Clunies Ross understood the great things that science could offer to Australia. "He looked at problems with a scientist's eye, and he solved them with a scientist's skills. As one of his students said, 'He saw the unfolding future pattern.'"

Professor Chubb urged those who believe that there are few opportunities for science graduates to rethink their position.

In 2014, the Office of the Chief Scientist commissioned Deloitte Access Economics<sup>2</sup> to survey over 1,000 businesses across all sectors about their future workforce requirements. More than four out of five firms indicated that people with science, technology, engineering and mathematics (STEM) qualifications are valuable to the workplace, even when

their qualification (that is, the discipline of their major field of study) is not a prerequisite for the role. Furthermore, over 70 per cent of those surveyed said their STEM qualified staff members are among their most innovative.

A further study conducted by the Australian Bureau of Statistics<sup>3</sup> found that 2.1 million Australian workers had a STEM qualification and their future employment prospects were much brighter than those without such a qualification. Job prospects for people holding a STEM qualification had grown at 1.5 times the rate of non-STEM jobs. These figures align with international research, which suggests 75 per cent of the fastest growing occupations require STEM skills and knowledge.

Professor Chubb noted that governments internationally have placed high importance on STEM skills at school, university and trade levels in the knowledge that jobs of the future are linked to STEM.

1. [www.chiefscientist.gov.au/2014/05/keynote-address-atse-clunies-ross-awards-dinner](http://www.chiefscientist.gov.au/2014/05/keynote-address-atse-clunies-ross-awards-dinner)

2. Deloitte Deloitte Access Economics, Australia's STEM workforce – a survey of employers (upcoming).

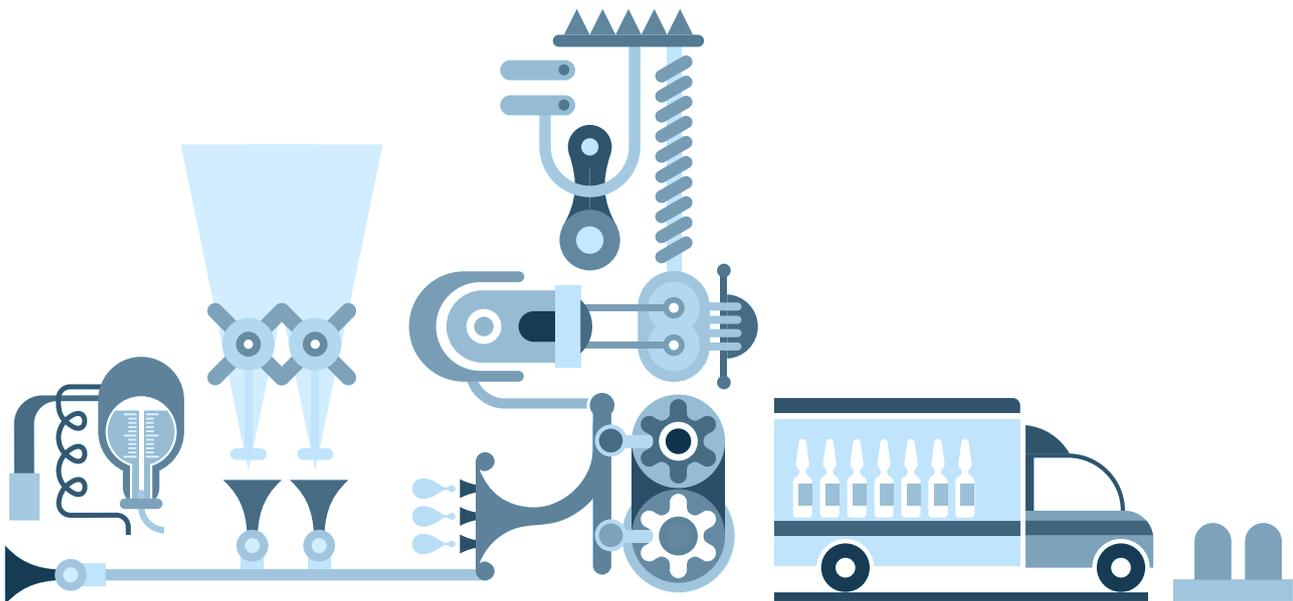
3. ABS report, *Perspectives on education and training: Australians with qualifications in science, technology, engineering and mathematics (STEM)*, 2010–11 (cat. no. 4250.0.55.005) (released 24 Feb 2014)

“I would encourage more employers right across the economy to see the value of a science-based education and thus a scientist’s skills which go beyond the particular discipline they studied.”

“Science graduates are vital to Australia’s future and therefore we must:

- Invest in people who will produce great science in our universities and research agencies.
- Invest in people who will apply that knowledge in industry.
- Invest in people who can adapt as technologies change.
- Invest in people who think critically, creatively and expansively.”

“People, in other words, like Ian Clunies Ross, who see the unfolding pattern and shape it to better ends. The nation we know today owes much to his strength and vision.”



### 3. Our Partners

NYSF program funding is sourced from a wide range of partners. Current partners are listed on the following page.

Rotary is the founding partner of NYSF. Rotary partnered with NYSF in the development and implementation of the original program's concept in 1983-84. Since then, Rotary has been involved in every stage of each year's program.

Rotary clubs receive, assess and endorse student applications for NYSF, referring those who have been endorsed as being of high standard to their local NYSF District Chair. The District Chair and NYSF Committee conduct selection interviews, undertake final ranking of applicants in order of their suitability and make the offer of places at NYSF in terms of the quota of places that has been allocated to that District.

This national selection process represents an enormous contribution of personal resources but Rotary's commitment and contribution does not stop there. Clubs and their members are closely involved in every step of the students' NYSF journey. Clubs may offer students financial assistance towards the cost of attending NYSF, negotiated on a case by case basis.

Rotary clubs and districts organise orientation meetings of selected students in preparation for NYSF, and assist in student travel connections to and from the January Sessions. Rotary also provides adult mentors at each January Session and home hospitality for students at key points in the program.

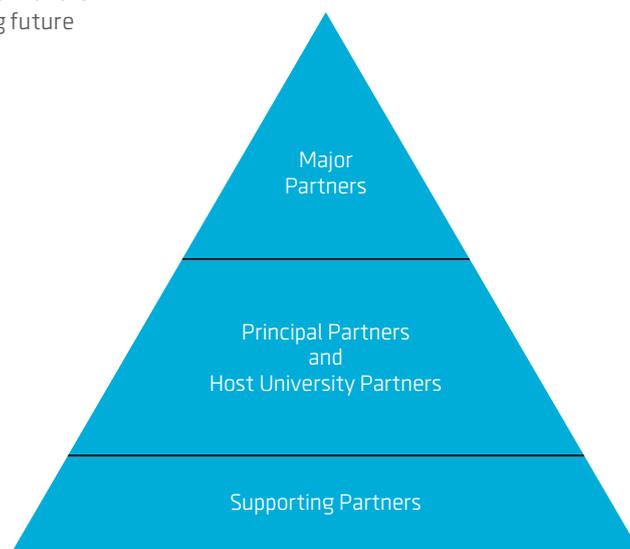
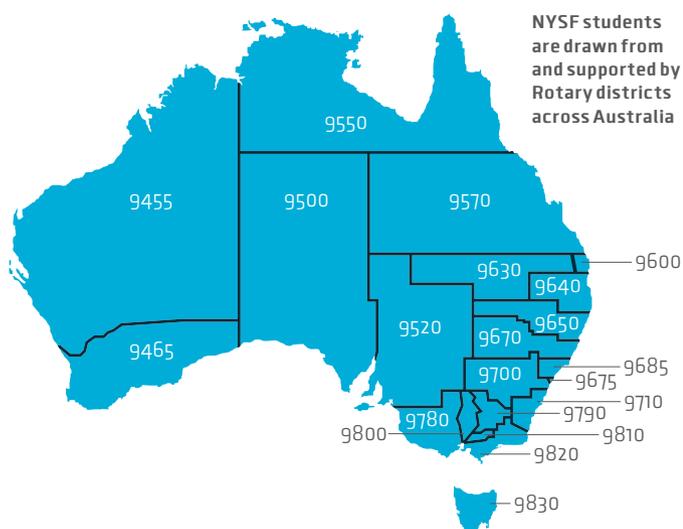
Rotary's deep and sustained commitment to assist with the development of young future

scientists is a major contribution to the NYSF's successful operation.

A wide range of companies has supported NYSF over the past thirty years. Our industry partners are organisations that have a vested interest in the development of leading scientists in Australia.

Universities have also actively supported the programs of the NYSF over the past thirty years.

New partners are being sought on a regular basis, and are categorised broadly as major partners, principal and host university partners, and supporting partners.



#### NYSF Partnership Structure

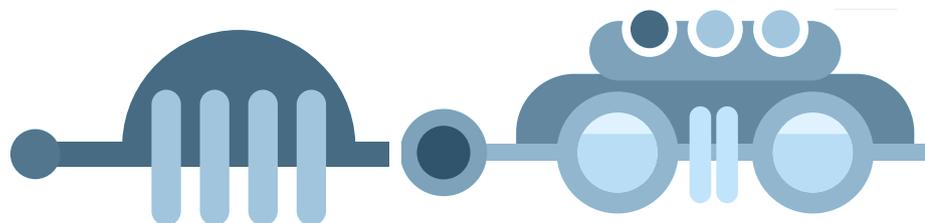
**Major Partners** contribute between \$100,000 to \$150,000 per year for a three-year period, an opportunity limited to 2-3 organisations, all operating in different sectors.

**Principal Partners and Host University Partners** contribute between \$50,000 to \$100,000 per year for a three-year period.

**Supporting Partners** contribute between \$10,000 to \$50,000 per year.

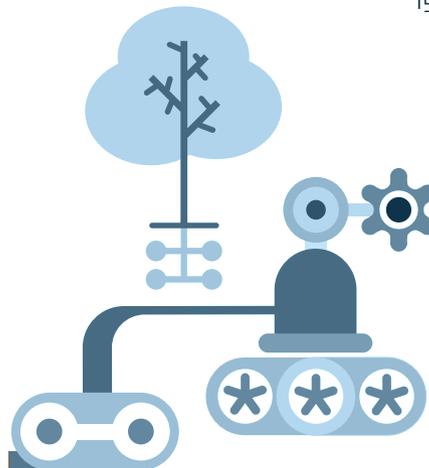
### Current Partners

Information about our Partners can be found on our corporate website at [www.nysf.edu.au/partners](http://www.nysf.edu.au/partners).



## Partners' Day 2014

During each January Session, the NYSF partners are invited to send representatives to present to the students about their organisations, and the opportunities that it provides for future study and employment. Presenters also attend the Science Dinner, offering another opportunity to share their experiences and information with students.



## 4. NYSF in 2014

### The year in review

#### National Science Summer School Incorporated

99 478 516 183

#### Council's Report

31 March 2014

The Council of National Science Summer School Incorporated (the Association) submit their report for the year ended 31 March 2014:

In the opinion of the Council of the National Science Summer School Incorporated, the accompanying Statement of Comprehensive Income, Statement of Financial Position, Statement of Changes in Equity and Statement of Cash Flows are drawn up so as to present fairly the state of affairs of the Association as at 31 March 2014 and the results and cash flows of the Association for the year ended on that date.

#### Council Members

The Council is responsible for the management of the Association. The following persons held positions on the Council of the Association during the year ended 31 March 2014 or as at the date of this report:

Names	Position	
Professor Ian Chubb AC	President	
Dr Craig Cormick	Chairman	Appointed 28/8/2013
Prof Hans Bachor	Chairman	Resigned 5/6/2013
Mr Adam de Troth	Secretary	Appointed 28/11/2013
Mr Ian Sayers	Secretary	Resigned 28/8/2013
Mr Michael Pedler	Treasurer	
Mr Geoffrey Burchfield	Director	Resigned 31/8/2013
Mr Damien Pearce	Director	Appointed 1/9/2013
Dr Lyn Hinds	CSIRO representative	
Mr Rob Woolley	Rotary Liason Officer	Appointed 1/7/2013
Mr Robert Greeney	Rotary Liason Officer	Resigned 30/8/2013
Mr Neil Young	Industry representative	Resigned 30/8/2013
Dr Elizabeth Truswell	Australian Academy of Science representative	
Prof Robin Stanton	ATSE representative	
Prof Tim Senden	ANU representative	
Dr Leah Moore	University of Canberra representative	Resigned 31/7/2013
Ms Maureen Manning	Rotary District Governor 9710	Appointed 1/7/2013
Mr Phil Armstrong	Rotary District Governor 9710	Resigned 30/8/2013
Prof Jo Ward	University of Curtin representative	

Council Members have been in office since the start of the financial year to the date of this report unless otherwise stated.

#### Operating Results

The operating deficit of the Association for the year ended 31 March 2014 was \$63,809 (2013: surplus of \$141,489).

#### Principal activities

The primary object for which the Association was established is to brief students in developments in science and technology and interest them in the importance of science-based industries in the future of Australia.



**National Science Summer School Incorporated**

99 478 546 183

**Council's Report****31 March 2014****Other Information**

The National Science Summer School is Incorporated under the Associations Incorporation Act 1991 (ACT).

Signed in accordance with a resolution of the Executive Committee.

Signed at Canberra this 31 day of July 2014

**National Science Summer School Incorporated**

99 478 546 183

**Statement by the Executive Committee****31 March 2014**

The Executive Committee declares that the financial statements comprising the attached Statement of Comprehensive Income, Statement of Financial Position, Statement of Changes in Equity, Statement of Cash Flows and Notes to the Financial Statements:

- (a) have been prepared in accordance with Australian Accounting Standards - Reduced Disclosure Requirements; and
- (b) give a true and fair view of the Association's financial position as at 31 March 2014 and of its performance as represented by the results of its operations and its cash flows for the financial year ended on that date.

In the Executive Committee's opinion:

- (a) there are reasonable grounds to believe that the Association will be able to pay its debts as and when they become due and payable.

This statement is made in accordance with a resolution of the Executive Committee and is signed for and on behalf of the Executive Committee by:

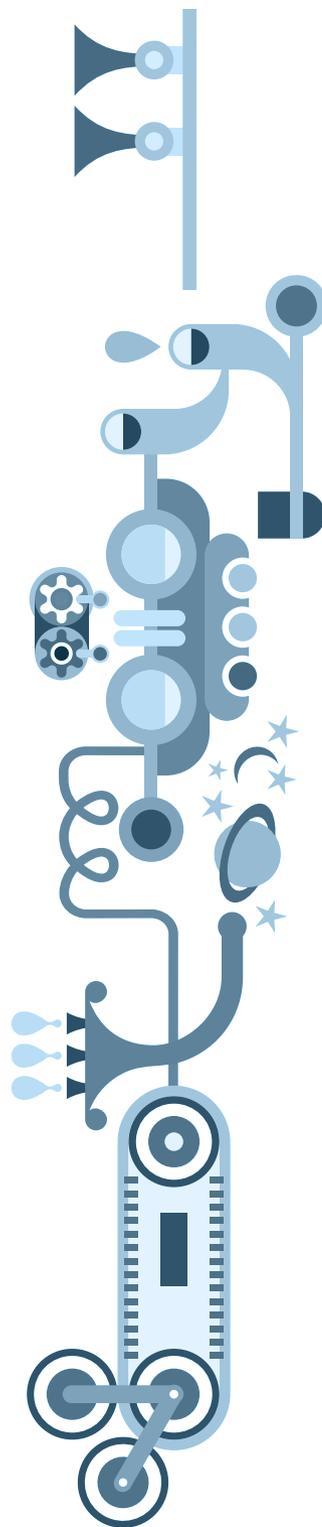
Signed at Canberra this 31 day of July 2014

**National Science Summer School Incorporated**  
99 478 816 183

**Statement of Comprehensive Income**  
**For the Year Ended 31 March 2014**

	Note	2014 \$	2013 \$
Revenue	2	2,076,239	2,230,245
Accommodation		(219,617)	(233,185)
Advertising		(35,993)	(19,896)
Audit		(9,540)	(8,950)
Bad and doubtful debts		(18,111)	-
Contractors		(127,551)	(155,473)
Depreciation		(1,428)	(1,397)
Entrance fees		(52,678)	(82,056)
Equipment		(7,671)	(5,484)
Fundraising		(10,500)	(79,800)
Insurance		(10,419)	(14,160)
Leadership cultural program		(57,369)	(47,339)
Legal fees		(28,235)	(5,856)
Meals		(311,106)	(284,576)
Merchandise		(12,658)	-
Office and administrative expenses		(59,178)	(56,420)
Other expenses		(23,409)	(43,380)
Promotions		(71,954)	(79,613)
Salary and other employee entitlements		(527,776)	(400,538)
Superannuation		(45,057)	(35,105)
Travel		(509,896)	(537,428)
		<u>(2,140,148)</u>	<u>(2,088,756)</u>
Income tax expense		-	-
<b>Surplus/(deficit) for the year</b>		<u>(63,909)</u>	<u>141,489</u>
<b>Other comprehensive Income</b>		-	-
<b>Total comprehensive income for the year</b>		<u>(63,909)</u>	<u>141,489</u>

The accompanying notes form part of these financial statements.

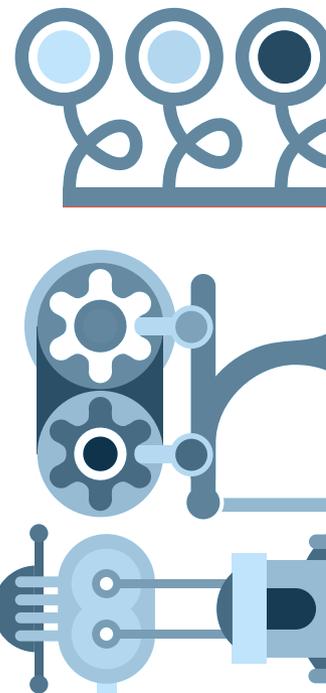


**National Science Summer School Incorporated**  
99 478 616 113

**Statement of Financial Position**  
As At 31 March 2014

	Note	2014 \$	2013 \$
<b>ASSETS</b>			
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	3	545,004	550,930
Trade and other receivables	4	94,802	177,599
Other assets	5	5,015	3,694
<b>TOTAL CURRENT ASSETS</b>		<b>644,821</b>	<b>732,223</b>
<b>NON-CURRENT ASSETS</b>			
Property, plant and equipment	6	1,679	3,635
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,679</b>	<b>3,635</b>
<b>TOTAL ASSETS</b>		<b>646,600</b>	<b>735,858</b>
<b>LIABILITIES</b>			
<b>CURRENT LIABILITIES</b>			
Trade and other payables	7	47,951	82,738
Provisions	8	77,702	89,616
Other liabilities	9	67,500	47,391
<b>TOTAL CURRENT LIABILITIES</b>		<b>193,153</b>	<b>219,747</b>
<b>NON-CURRENT LIABILITIES</b>			
Provision	8	1,245	-
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>1,245</b>	<b>-</b>
<b>TOTAL LIABILITIES</b>		<b>194,398</b>	<b>219,747</b>
<b>NET ASSETS</b>		<b>452,202</b>	<b>516,111</b>
<b>ACCUMULATED FUNDS</b>			
Retained surpluses		452,202	516,111
<b>TOTAL ACCUMULATED FUNDS</b>		<b>452,202</b>	<b>516,111</b>

The accompanying notes form part of these financial statements.



## 5. Program Reports

### 2014 January Sessions A, B and C

- Session A** – 6–18 January
- Session B** – 6–18 January
- Session C** – 20 January–1 February

Three 2014 January sessions were delivered successfully over 12 days each – two in Canberra (Session A and C) and one session in Perth (Session B) with 440 young Australians in attendance overall. An international cohort consisted of 17 students attended from Germany, Canada, New Zealand and South Africa.

The program remained consistent with previous years and covered a range of visits to laboratories and facilities associated with the host universities, and local industry partner sites.

The laboratory and site visits were once again comprehensive, offering access and insights to a wide range of research fields.

In Canberra, students visited Parliament House for the Opening Ceremony and a session with the Parliamentary Education Office, Geoscience Australia, the ACCIONA Windfarm, the Australian National University including the Supercomputer facility, VisLab and Climate Change Institute, the Australian Defence Force Academy (AFDA), University of New South Wales School of Engineering, Murray-Darling Basin Authority and the Australian Academy of Science.

In Perth, students visited a range of research facilities including the Alcoa Huntly Mine, the Defence Science and Technology Organisation and the International Centre for Radio Astronomy Research.

Development of social skills were addressed during these sessions, as well as participation in mock job interviews, enhancing communication skills and attending semi-formal evening functions with scientists from Canberra and Perth.



There was also time for fun, with visits to local sporting and swimming facilities, allowing students and staff the opportunity to cool down and enjoy some informal activities as part of the program.

Students and student staff leaders provided positive feedback and identified opportunities for continuous improvement to both the program and the administrative arrangements.



## National Science Teachers' Summer School

The National Science Teachers' Summer School (NSTSS) was presented in the second week of January 2014, in conjunction with the second week of Session A of the NYSF at the Australian National University (ANU).

A collaboration between the NYSF and the Australian Science Teachers Association (ASTA), the six day program aims to reconnect teachers with their passion for science, by immersing them in a stimulating, multidisciplinary program of research and hands-on experiments. At the same time, they are forging valuable new connections with top scientists and educators. It also gives science teachers a real sense of the vital role they play in the flow of knowledge from research to community and the next generation of scientists.

The academic staff and other educators who met with the teachers in Canberra were equally enthusiastic about exploring new ways of getting the latest science out of the labs and research publications, and into schools and the wider community.

Participants heard keynote lectures across the full range of sciences, visited major research facilities at ANU and across the Canberra region and had hands-on laboratory sessions specifically selected to stimulate discussion about the underlying science. There were workshops to introduce the latest teaching aids and uniquely, the opportunity to engage with the students attending the NYSF.

Feedback from the participants indicates that the NSTSS is successfully delivering a highly valued professional development program. Teachers report that they are still in contact with each other and perhaps, more significantly, with the researchers they met in Canberra, who continue to offer information and resources to assist them in their classes.

NSTSS received funding from ANU in 2014, generous in-kind support was also provided by Questacon, CSIRO, Geoscience Australia, and the Canberra Deep Space Communication Complex as well as many research departments at ANU and UC.

"When asked, why did you spend a week of your school holidays at NSTSS? I tell them two things: I experienced the thrill of science and I was exposed to cutting-edge, real science and it was exciting. Also, it has enriched my teaching of science, giving me experiences to enrich my classroom and hopefully, enable me to share the thrill of science with my students."

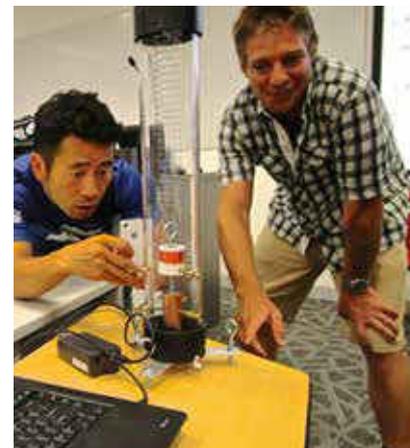
**Tony Egan,**

Cornerstone College, Mount Barker, South Australia

"I feel empowered by the wealth of knowledge I have gained and feel confident to inspire my students into the fields of science and engineering. There are so many opportunities out there for students and it is our role to ensure they are exposed to these fields."

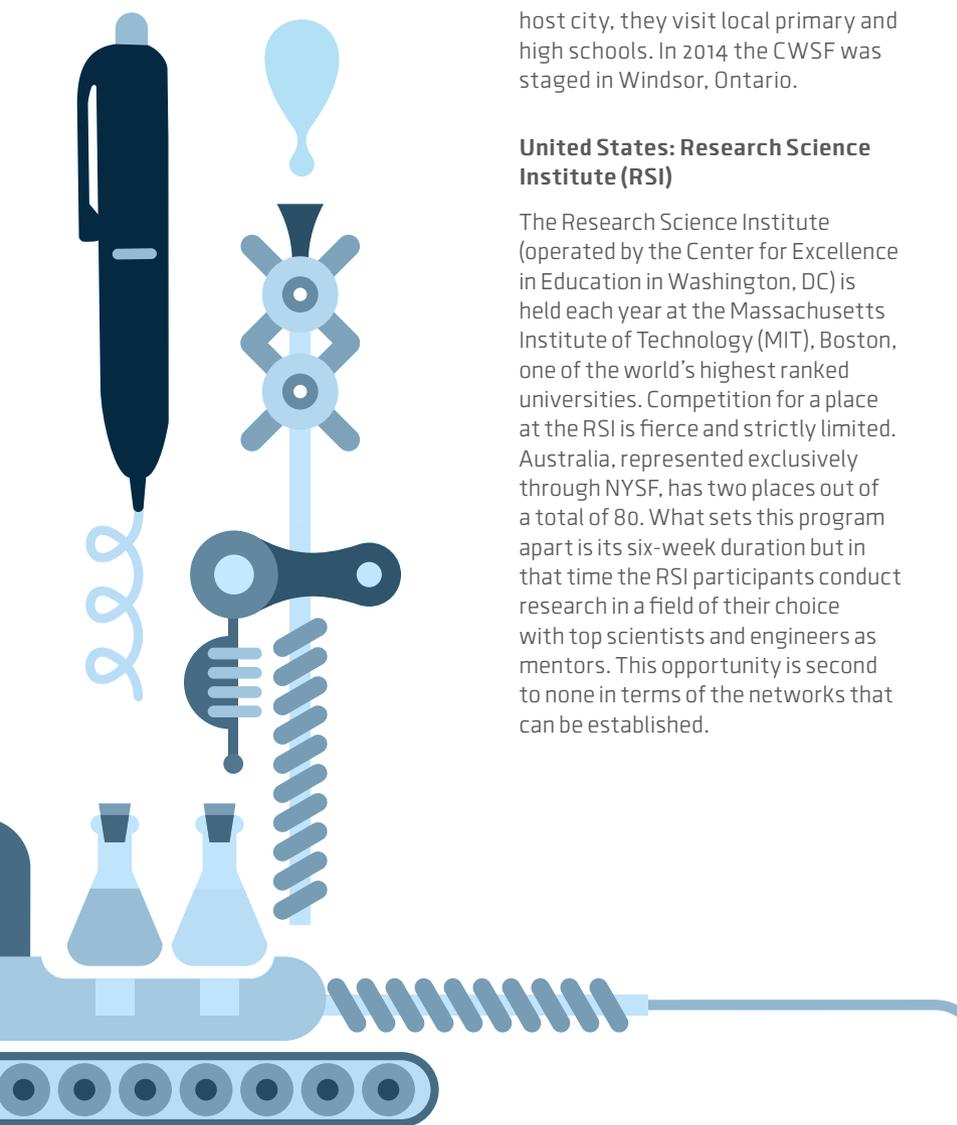
**Lauren Kirk,**

Bordertown High School, South Australia



## International Program

The 2014 International Program offered selected NYSF students the opportunity to attend six international science, engineering and technology related events.



### Canada: Canada-Wide Science Fair (CWSF)

The CWSF is Canada's premier youth science event, and functions as the "national finals" of an annual science competition. More than 500 successful Canadian participants present a scientific project, which has previously been ranked highly in regional science fairs. Six Australian students are invited to the CWSF as ambassadors for Australian science and while in the host city, they visit local primary and high schools. In 2014 the CWSF was staged in Windsor, Ontario.

### United States: Research Science Institute (RSI)

The Research Science Institute (operated by the Center for Excellence in Education in Washington, DC) is held each year at the Massachusetts Institute of Technology (MIT), Boston, one of the world's highest ranked universities. Competition for a place at the RSI is fierce and strictly limited. Australia, represented exclusively through NYSF, has two places out of a total of 80. What sets this program apart is its six-week duration but in that time the RSI participants conduct research in a field of their choice with top scientists and engineers as mentors. This opportunity is second to none in terms of the networks that can be established.

### South Africa: National Youth Science Week (NYSW)

The NYSW attracts the best senior science students from all over southern Africa plus six Australians by special invitation. Like the NYSF, this South African program showcases top science and engineering career paths ranging from nuclear physics to aeronautical and automotive engineering.

### Germany: International Science Summer School Heidelberg (ISH)

Similar to the US program, the ISH is a research-based program that runs for four weeks. The three Australian students attending are hosted by the city of Heidelberg, which is home to some of the world's finest research institutes such as the European Molecular Biology Laboratory (EMBL) and the Max Planck Institutes for Astronomy, Medical Research, and Nuclear Physics. NYSF's three Australian students join students from Europe, Asia and North America for the program.



### European Open Science Forum 2014 (EOSF)

EOSF is a biennial conference that was first held in Stockholm in 2004. The NYSF sent six students to represent Australia at the 2014 program which this year was hosted in Copenhagen, Denmark in June. EOSF is dedicated to scientific research education and innovation and is an opportunity for leading scientists, young researchers, students, entrepreneurs, policymakers, journalists and the general public to discuss new discoveries and debate the direction that research is taking in all the sciences.

### London International Youth Science Forum (LIYSF)

The LIYSF has been running for more than 50 years and attracts over 300 students from almost 60 countries for a single two-week session. The NYSF sends eight students representing Australia. Hosted by Imperial College in South Kensington, the students attend lectures by high-profile scientists and see some of the finest research labs in the UK. There are day visits to Oxford and Cambridge and debates on controversial issues not to mention the chance to join an instant global network.

### Stockholm International Youth Science Seminar (SIYSS)

The SIYSS is centred on the presentation in December each year of the Nobel Prizes for Science. Not surprisingly only a small number of international students are invited to this prestigious event and Australia, represented exclusively through the NYSF, is the only country that is guaranteed two places each year. Students attending the week-long SIYSS are accommodated on the AF Chapman, a sailing ship moored in Stockholm Harbour.

As well as attending the Nobel Prize Ceremony, all participants attend the dissertations of the Laureates and the official Banquet and Ball, the climax of the Nobel week.



Travel on this program for students from New South Wales has been supported by NSW Trade & Investment.



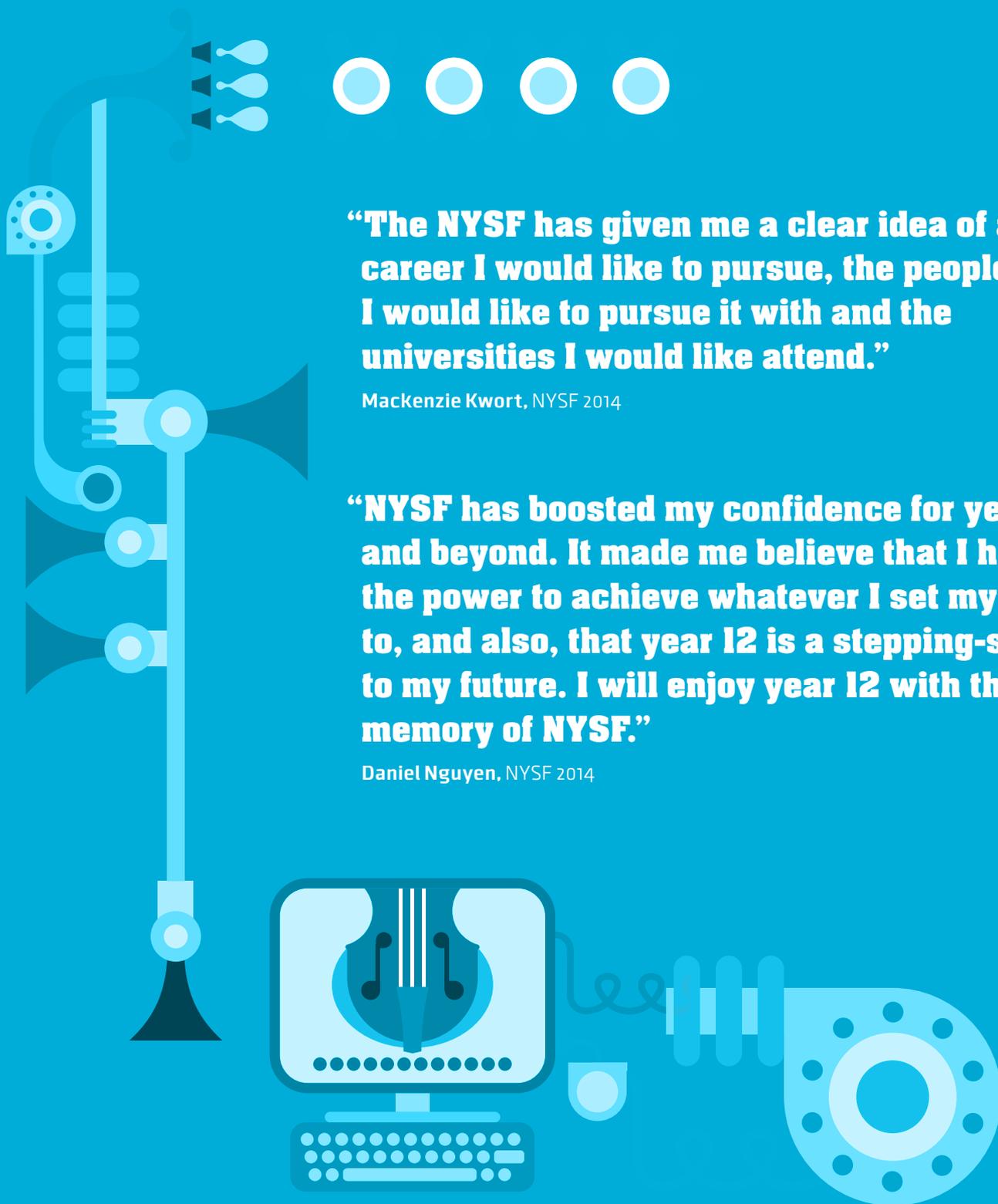


**“The NYSF has given me a clear idea of a career I would like to pursue, the people I would like to pursue it with and the universities I would like attend.”**

Mackenzie Kwort, NYSF 2014

**“NYSF has boosted my confidence for year 12 and beyond. It made me believe that I have the power to achieve whatever I set my mind to, and also, that year 12 is a stepping-stone to my future. I will enjoy year 12 with the memory of NYSF.”**

Daniel Nguyen, NYSF 2014





### Next Step Program

The NYSF Next Step Program was run in five locations in 2014:

- Melbourne
- Brisbane
- Adelaide
- Canberra
- Sydney

The Next Step Program is designed to demonstrate to students who participated in NYSF January Sessions the range of study options available to them in the major geographic centres in Australia. The program is run in conjunction with our partners in each centre, and the decision to run the program is based on demand from students and the partners' capacity to be involved.

Seventy (70) students took up the opportunity to take part in the Melbourne session held in March 2014. The University of Melbourne offered students a full day of lectures and lab visits and NYSF Partners CSL Limited and GlaxoSmithKline both hosted site visits to their facilities. Students toured two industrial labs and facilities and gained valuable insights into the complexities of the processes associated with the development of commercial products.

April saw the Next Step Program roll out in Brisbane, with 70 students taking part. Students visited the University of Queensland, Queensland University of Technology, Queensland Brain Institute and research labs, the Queensland Institute of Medical Research's Berghofer Institute and the State Library of Queensland's The Edge Facility. The University of Queensland also hosted a Speed Date a Scientists night where students could talk to researchers about their career paths.



In Canberra also in April, the Next Step Program attracted a core group of 15 students, with 2013 alumni also taking part in the visit to Lockheed Martin's Security Intelligence Centre. Visits were also made to the Australian National University, the Australian National Botanic Gardens and Mount Stromlo Observatory.

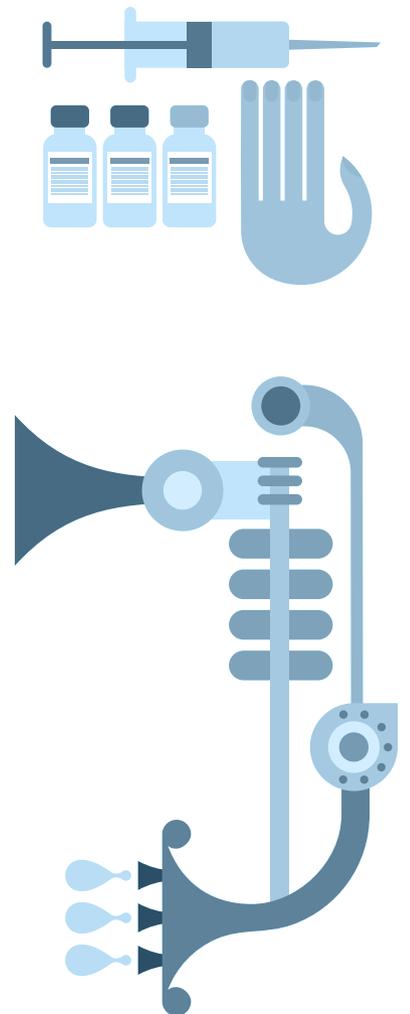
The Sydney Next Step Program was in July, and was spread across a number of institutions and facilities, including the Australian Nuclear Science and Technology Organisation, the University of New South Wales, the University of Western Sydney's Campbelltown and Hawkesbury Campuses.

The Adelaide and Perth Next Step Programs did not proceed in 2014.





IMAGE COURTESY ALISTAIR CHANDLER



## Indigenous Youth Science Forum

The 2013 Indigenous Youth Science Forum (IYSF) was held from 6–11 October. Thirteen Year 10 and 11 students (7 girls, 6 boys) from regional towns in Western Australia, such as Derby, Karratha, Geraldton, Albany and Port Headland, travelled to Perth to attend the program.

Visits were made to the University of Western Australia, Curtin University, and the National Centre for Excellence in Desalination. These organisations provided “hands on” experience for students at their facilities and in laboratory visits, including access to research staff who shared workplace and study experiences.

In general, the students rated the program very highly and the written feedback provided many positive comments:

“All I can say is thank you sooo much for this opportunity... I loved it!!!!”

“Definitely worthwhile”

“It was excellent, loved every minute of it.”

“Keep doing what you’re doing.”

A key goal of the IYSF is to encourage more indigenous students to apply for the January sessions as they enter Year 12. One student who had attended the IYSF in 2013 was invited to join Session A in Canberra 2014. In addition, a leadership pathway has been developed for the students who went on to join the January sessions. They are now invited to join the following year’s IYSF as a student mentor.

The 2013 IYSF was made possible by RioTinto sponsorship, via its Communities and Partnerships Program, IBM and the Defence Science and Technology Organisation



## Student Staff Leadership Program

The Student Staff Leadership Program covered a range of issues for the 43 students who were selected to participate, including:

- an understanding of the NYSF and its history and philosophy
- the responsibilities of being a student staff leader
- the importance of planning and analysing a situation
- handling specific tasks during the January NYSF sessions
- leadership, professionalism and decision making
- running NYSF orientation, and public speaking, and
- team-building.

The outdoor trekking experience and student camp environment added to the understanding that team-building exercises can provide, and also offered opportunity for shared experiences and insights.

Gaining feedback from peers and the facilitated learning environment allowed the participants to feel empowered about the roles they were taking on during the January Sessions.

Students reported that they valued the opportunity to practice being a student staff leader, and to develop skills that would be needed in the January Sessions.



Indigenous student, Kiah Henderson (centre) with CSL Ltd representatives, Dr Jenny Chia and Dr Tom Barnes. Kiah participated in the Indigenous Youth Science Forum in October 2013, and her attendance in January 2014 was generously supported by CSL.



(l-r) ASTA CEO Vic Dobos, the Hon Sharon Bird MP, Dr Liz New, Professor Ian Chubb, and Jessica Garrett at the launch of *Australia's Future*

## Australia's Future

*Australia's Future* features the stories of 28 young people and the science, technology, engineering and maths (STEM) study and career paths that have taken them from school to university and into the work place.

Launched by the Chief Scientist for Australia, Professor Ian Chubb in March 2014, *Australia's Future* aims to show young people the range of study and job possibilities that are available to them, through real Australian stories.

*Australia's Future* was supported by the NYSF in association with the Office for the Chief Scientist, the Australian Science Teachers Association, the Australian Association of Mathematics Teachers, the Australian Mathematics Trust, Australian Science Innovations, CSIRO, and the National Mathematics Summer School.

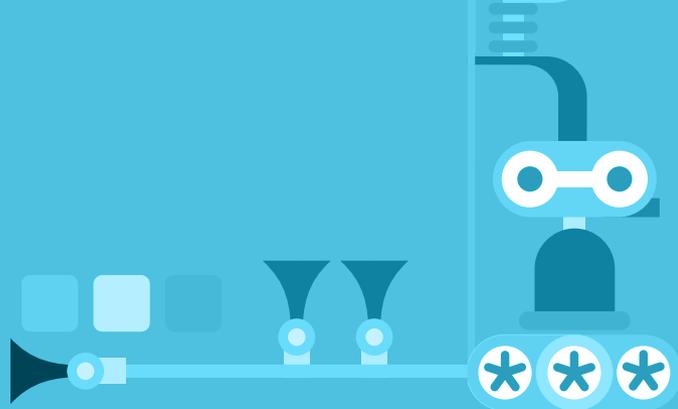
Go to [www.australiasfuture.com](http://www.australiasfuture.com) to download a copy of the publication.



Damien Pearce, Patrick Haylock, NYSF Alumnus and Student Staff Leader, and Sue Welin, IP Australiaw



# Alumni Testimonials



## David Snowden

### “...being a nerd was a good thing”

It sounds like an overstatement, but the NYSF was one of the truly formative experiences of my life. The two weeks in Canberra during 1998's Session A were a critical step. Most of my best and lasting relationships stem from my time at NYSF, the people I met through it, or the confidence I gained as a result of meeting a load of truly like-minded people.

Most importantly, I learned that being a nerd was a good thing. Some might think of science as a pursuit of the anti-social, but that couldn't be farther from the truth. Being a leader and being a scientist or engineer are one and the same thing.

The NYSF also taught me to think and aim big; this only being reinforced during the intervening 16 years by the achievements of my fellow NYSF attendees.

Offered a scholarship, I studied Computer Engineering at University of New South Wales (UNSW). While the engineering course was fantastic, it was the extra-curricular that allowed for the real education. The university bar was one of the best classrooms – we taught ourselves how to think via argument and debate.

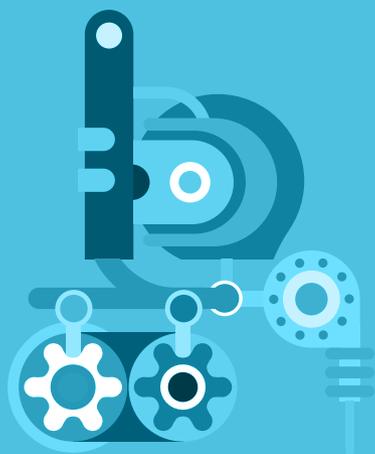
Doing a PhD was another fantastic education. I studied power management and operating systems, and it took far longer than it should have. Being a nerd is good but it can be distracting when you're interested in so much. In how many professions can you find people who are really excited about what they're doing? I'll bet that the people who study science and engineering rank high on that scale.

One of the biggest thinking, extra curricular activities I got into at University was the UNSW Solar Racing Team. I learned to build cars – which drove 3000 km across the desert – with a diverse team with real deadlines. Ten years, six races and three solar cars later, it culminated with my picture in the Guinness Book of Records (2012). I'm now a member of the technical faculty of the World Solar Challenge.

So where did I end up? Over the last five years, since finishing my PhD, I've been involved in a race of a different kind: optimising financial systems around the world. I started, and now run, a business, which designs and manufactures the network hardware carrying hundreds of millions of dollars in trades each day. We are the best in the world at what we do, and we do it from Australia.

Not bad for two weeks at the beginning of year twelve!

**David Snowden**  
NYSF Alumnus 1998





## Tamaya Perresini

After being part of the staff team during January 2014, I am still in awe of the fact the NYSF is largely run by young people on session; and I feel privileged to be part of that.

From the training sessions during the ANZAC program and the trek, I have grown personally, improving my presentation skills and fine-tuning my problem solving and decision-making skills. The greatest asset of all of the training was learning to work in a team of young people with a diverse range of leadership styles and techniques – all of which were tested in many ways, both in the built environment and in the bush.

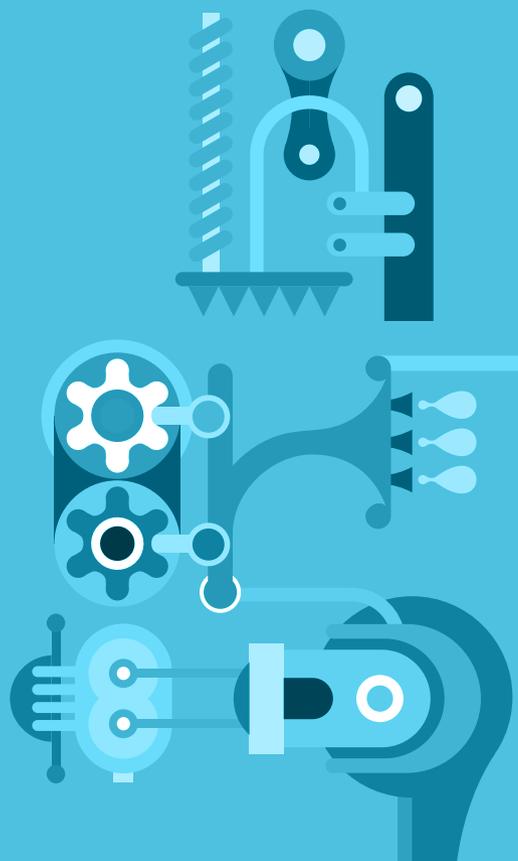
Our preparation and training started in April 2013, and it is safe to say I was eager (and a little bit anxious) to get to session in Canberra in January 2014. The lead up to the session and the 14 days of the program, including pre-session for staff, were exhausting; but I couldn't imagine it any better.

Of course there were times of high stress, and sleep deprivation, however these were all outweighed by the fantastic energy and exuberance that the NYSF brings. In the space of those two weeks I probably underwent the steepest learning curve of my life, and having left the session I know my leadership, problem solving, presentation and organisational skills have improved dramatically.

Coming back as a student staff leader to the NYSF is a truly humbling experience: having the opportunity to work with such an awesome team of young leaders and to have also been part of the personal development of a diverse group of students going into year 12.

It's easy to say that it was one of the best starts to any year and has certainly been one of the most fulfilling experiences I've ever encountered.

**Tamaya Perresini**  
**Student Staff Leader 2014**  
**NYSF Alumna 2013**





Students from District 9650 at Sydney Next Step 2014 visit to University of New South Wales

## Beth Fuller View from an NYSF District Chair

The role of the Rotary NYSF District Chair (DC) is more than just one of coordinating the recruitment of students. For me, the challenge has been in balancing the tasks that related to the science exposure for those selected to attend, while also finding opportunities in the district where those students could add value to Rotary.

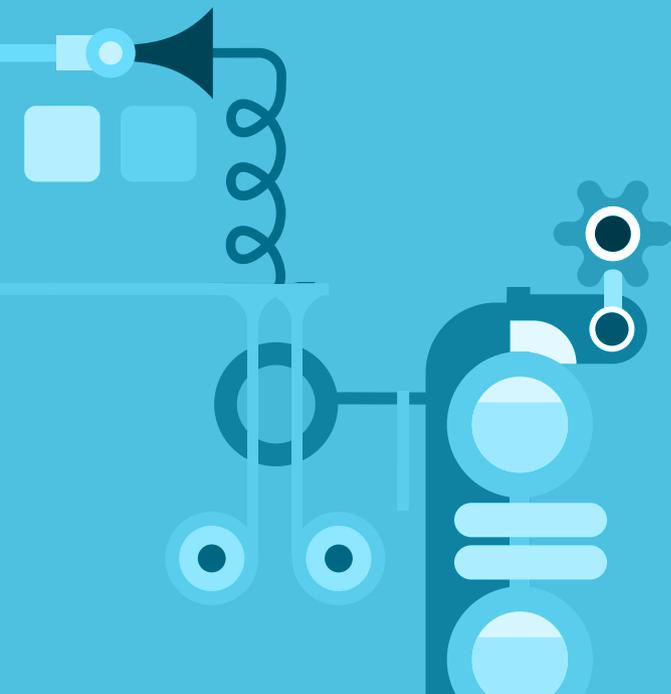
The highlight of my personal journey has most certainly been in following the young people involved, who have been so changed by their NYSF experience. What joy to hear of new found scientific passions and receive thanks for the belief we had in their ability. Whilst not the case with every student 'under my watch', it is the transformation of those students who best matched the selection attributes we had framed that has been of particular interest across my time as an NYSF Rotary DC.

The approach taken in D9650 has been guided by a capacity-building approach: strengthening partnerships with Rotary clubs and schools, building connections with media and exploring interest of regional tertiary education and industry partners. The District NYSF work plan has guided various reforms, and provided a framework to report on progress within the Rotary District, as well as to NYSF nationally. The reforms with district selections have produced a highly reliable process and one that was easy to transport to different settings. Our exploration of the 'virtual' Orientation was brave but restricted by available technology. With the considerable gains in line-speed and access to more affordable platforms, this area may be attractive to other District Chairs in the future.

Without a doubt, there was resistance to the various changes implemented in managing the NYSF related activities. I suspect that people were challenged by the prospect of change rather than the changes themselves. The enthusiasm from Rotary clubs across each step of the NYSF processes was an indication that the approach to recruitment provided value for the students and for the clubs, as they had witnessed their contribution to the future.

Efforts at the national level are now being directed to exploring new and financially attractive partnerships for NYSF. It may well be time to consider a more standard approach for managing the processes that Rotary conducts on behalf of the NYSF.

**Beth Fuller** (PhD, MPH, Grad Dip Phys, BSc)  
**Immediate past District Chair**  
**Rotary District 9650**



## Guy Leckenby

**“I don’t think I’ll ever attend a party quite that grand again.”**

IMAGES GUY LECKENBY



Every Australian student who has attended The Stockholm International Youth Science Seminar (SIYSS) thinks that they will never be selected; it’s that prestigious. I was skipping for a whole week when I learnt that my application was successful.

Barely a week after finishing the Higher School Certificate, I was jetting off to Stockholm as one of two Australians chosen out of 25 in the world to attend SIYSS. My travelling partner was Cassie Lieschke, another NYSF 2013 student from Wollongong. The week spent at SIYSS – especially our attendance at the Nobel Festivities – was amazing.

On arriving, we spent time getting to know the participants from other countries, and preparing for our research project presentations and the ethics seminar. This turned into a debate about the possibilities of artificial intelligence, scientific responsibility, and whether we should publish papers on enhanced viral flu infections.

Really, there were many highlights:

- visiting the Royal Institute of Technology for lessons on the material science of paper.
- lunch with the Secretary of the Nobel Committee and a presentation on the award in Medicine and Physiology.
- the press conference with the Nobel Laureates.
- the ethics seminar at the Nobel Museum – it was almost textbook NYSF material and produced many interesting questions and challenges for the first SIYSS ethics seminar.

On Sunday we attended the Nobel Lectures, starting with Physics. This Nobel Prize is what inspired me to become a scientist. Cassie and I then met with the Australian Ambassador who invited for us coffee and cake at home with his family.

We arrived at the lecture hall at Stockholm University on Monday where the previous day, the Nobel Laureates had presented their work. What surprised me was how people were genuinely interested and looking forward to my presentation. After explaining my project a million times, I knew it well enough to explain it in five minutes to 500 expectant faces. It was a lot of fun. Students treated me as if I had won the Nobel Prize, it’s the most important I’ve ever felt.

Then it was time to attend the Nobel Reception where we mingled with the Nobel Laureates and Swedish scientists from local universities and businesses, as well as members of the Nobel Committee. This was an incredible two hours that resulted in me acquiring the Nobel physics poster carrying the signature of Peter Higgs and Michel Levitt, which now takes pride of place in my room.



Which brings us to the Nobel Day itself. We had our group photo taken in front of the Royal Palace, which attracted quite a crowd. The Ceremony was overwhelming and remarkable as we watched the Nobel Laureates individually receive their gold replica of Alfred Nobel’s face on a coin – the famous Nobel Medallions of pure gold – in total silence from His Majesty the King of Norway.

Then on to the Stockholm City Hall where the Nobel Banquet was held. And wow! The tables were immaculate, even our napkins had Alfred Nobel’s face pressed into them and the cutlery was gold plated and ordered specially for the Nobel Foundation. It is still impossible to describe the feeling as we ascended from the Blue Hall heading to the nightcap event hosted by Karolinska Institute, which was almost as impressive as the banquet. I don’t think I’ll ever attend a party quite that grand again.

It was with bursting hearts that we returned to Australia for... Christmas! The stories flowed, as it was an amazing experience that left us with too many ‘once in a lifetimes’ to count.

As I look back on it, it really was a life changing experience.

**Guy Leckenby**  
**NYSF 2013, International program 2013,**  
**student staff 2014**

Inspiring young Australians since 1984

**For more information visit:**

[www.nysf.edu.au](http://www.nysf.edu.au)

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