

CONFERENCE PROGRAMME

The Conference of the Science Teachers Association of Tasmania ABN: 97 660 939 433

A Major Professional Learning event for all Science Educators.

Hellyer College, Burnie (23rd – 24th March, 2018).

Theme: *Game Changers and Change Makers*

Invitation to all potential delegates of CONSTAT 2018 in Burnie.

CONSTAT 2018 is shaping up to be a highly engaging event in the educational calendar, one which will allow delegates to refresh, refill and renew their knowledge and experiences in Science and STEM related fields, while enjoying the company of like-minded colleagues.

The programme outline includes a series of Friday (fieldtrips and conference dinner) and Saturday (keynotes addresses, workshops, trade displays) events from which delegates are warmly invited to peruse the offerings to assist with their making of booking selections.

Conference workshops on Sat 24th will include 45 and/or 90 min sessions of relevance to: Educational Theory and its Applications, Early Childhood and Primary Years, Middle Years, High School teaching, Senior College curriculum and Laboratory Technician Practise. These will be advised upon a little later. All guest speakers will be offering workshops too.

Note: registration is cheaper for STAT members. For 2018 membership:

<http://stat.org.au/membership/>

Friday 23rd March

Fieldtrips – (see further for more information)

Friday evening: Dinner

6 – 7pm: pre-dinner drinks at **The Point, Burnie**

7 – 10.30 pm: DINNER (special diet needs in advance)

Dinner Speaker: Dr Gurion Ang, Entomologist and Science Lecturer, UQ

Saturday 24th March

8.30am – 9.00am: Conference Registration

9.00am – 9.15am: Official Opening and Welcome to Hellyer College.

9.15am – 10.00am: **Keynote 1: Address: Prof Deborah Corrigan**, Faculty of Science Education, Monash University.

10.00am – 10.30am: Morning tea and trades viewing

10.30am – 11.15am: **WORKSHOP 1**

11.30am – 12.15pm: **WORKSHOP 2**

12.15pm – 12.35pm: STAT Annual General Meeting and trades viewing

12.30pm – 1.15 pm: LUNCH and trades viewing

1:15pm – 2:00 pm: **Keynote 2: Associate Professor Sharon Fraser** (UTAS), lecturer in science education / scientist.

2.15pm – 3.00pm: **WORKSHOP 3**

3.00pm – 3.30pm: Closing gathering, nametag return and trades gift distribution

Keynote and Dinner Speakers



Professor Deborah Corrigan

Challenging accepted wisdom in science education is part of Professor Deborah Corrigan's research approach, which is driven by the urge to make students enthusiastic about learning science and more recently, STEM. Among her goals is that of 'engaging students' hearts and minds'. Deborah has taken on the challenge posed by the persistent decline in school-science popularity, despite public interest in science and STEM remaining high, as is evidenced by the high tourist attractiveness of Scienceworks, museums and aquariums, globally. Deb wonders why students can be so interested in science out of school, but not within. As deputy dean of the Monash Faculty of Education she finds time for research into such conflicting issues, despite the demands of that role and her work at state and federal level in curriculum development and policy. Deb believes that science teachers need to package their content very differently to suit 21st century students. 'We need critically creative thinkers to make science teaching better', she says.



**Associate Professor
Sharon Fraser**

Associate Professor Sharon Fraser is a lecturer in science education in the UTAS Faculty of Education. Sharon began her academic career as a scientist. After a number of years working in related fields, and teaching in secondary schools, she proceeded into the area of science, and more recently, STEM educational research. Sharon has widespread experience in the quality assurance and enhancement of learning and teaching and has expertise in the development, conducting and management of strategic education and research projects, in higher education. Her research and teaching is centred on raising awareness about science pedagogical content knowledge, and improving learning through its enhancement. Sharon has multiple publications in education, in scientific research and specifically, in science education. She has widespread experience in developing professional learning resources and mentoring. Sharon teaches into initial teacher education, postgraduate courses and supervises honours and postgraduate research students.



Dr Gurion Ang

Gurion Ang finished his PhD studies in 2017 with the University of Queensland School of Biological Sciences. The over-arching theme of his research is in insect-plant interactions: understanding the intricate relationships between pest insects and crop plants enable us to employ pest management strategies which ultimately reduce our reliance on pesticides. He examines these relationships using both a behavioural ecology and chemical ecology approach. Gurion also teaches into several undergraduate and postgraduate courses, and his secondary research interest is in teaching and learning techniques that maximise student learning and performance. He also develops and delivers original workshops for pre-university students that are integrated with international science curricula. In his dinner talk at CONSTAT 2018, Gurion will share some anecdotes from his research, of how this has shaped a better understanding of insect behaviour and of how his work is creating change and making a difference in developing countries.

Field Trip Options – Friday 23rd March 2018

Field trips are suitable for all

Excursion 1

A walk through geological time on the NW Coast:

Teacher Science Education Programme (TESEP). Philip Sanson, Tasmanian Coordinator.



The field trip will visit a number of significant geological localities on the north-west coast of Tasmania. Participants will gain an understanding of aspects of the geological evolution of Tasmania from its relationship with parts of North America through to examples of rocks formed under different climatic regimes and geological environments. Localities to be visited will be suitable for teachers to take their students.

Min 5 Max 11

Leaving Hellyer car park 12.30pm returning 5.30pm

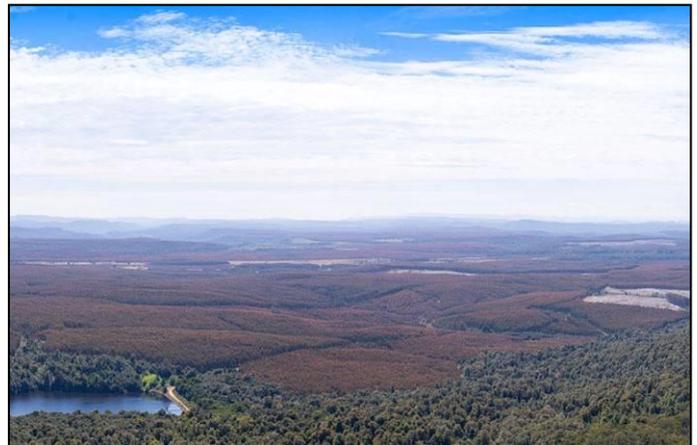
Cost \$20

Excursion 2

Trees in the landscape – from seed to writing paper:

Darcy Vickers: Forestry Education Foundation inc

This field experience provides the opportunity to explore the science of land management alongside the science and processes involved in growing trees for the production of high quality writing and printing papers. The tour will begin with a visit to the Forico Nursery at Somerset to trace the journey from seed to seedling before heading to a seed orchard to meet with a specialists to discuss research and outcomes related to tree improvement programs. Back on the bus and off to explore the Surry Hills Estate – everything from the planning, establishment and maintenance of eucalypt plantations through to biodiversity maintenance of native forest and grassland environments. This may



also include working with researches in the areas of Ptunnara Brown Butterfly habitat management and fire management practices to maintain biodiversity at the landscape level.

On the return journey (subject to time) we may call into the Fibre Technology Laboratory to be taken through the paper making and quality control processes – tests on wood fibre, chemical pulping, paper sheet making and paper properties.

Throughout the day we will also explore how the Forest Education Foundation can support teachers and students through curriculum relevant resources, class visit and field trip programs – this will include examples of some of our student activities.

Min 8 Max 20

Leaving Hellyer car park 9.30am via bus- full day trip

Cost \$20

Excursion 3

Hellyer Road Distillery –



Cost includes tasting.

1 hour tours of the Chemistry behind the fermentation and distillation process.

Please specify preferred time:

Times: 10.30am, 11.30am, 2pm, 3pm, 4pm

Min 6 - Max 10 per tour.

Make your own way to the Distillery at booked time

Cost \$18

Excursion 4

Elphinstone Group

Select any or all of 1,2,3,4

Location #1: Elphinstone Pty Ltd Wynyard Manufacturing Facilities
83 & 91 Terra Nova Drive, Wynyard
 Manufacture of Orica MMU units, Metro buses, wiring harness manufacture, Caterpillar supplier consolidation, containerised packaging and other
 (11 am)



Location #2: Elphinstone Pty Ltd Burnie Facility,
145 Wilson Street, Burnie
 Manufacturing, Research and Development, Parts / Warehouse facility.
 (1pm)



Location #3: Elphinstone Pty Ltd Refurbished Manufacturing Facility,
2 Ormsby Street, Wivenhoe
 State of the art, single flow multi model manufacturing facility for all CAT OEM products including the range of underground mining support vehicles, Haulmax long haul mining trucks and Railmax road rail excavators.
 (2pm)

Location #4: Elphinstone Simulated Work Environment

13 Wellington Street, Burnie

The Elphinstone SWE is an interactive training system used to promote Lean Production System principles and enhance continuous improvement initiatives. This well-proven training tool will actively demonstrate the benefits of Lean methodologies such as Put Safety First, Chase Waste, Make Value Flow, Drive Standard Work, Go See Act, Stop To Fix and Make It Visual. The Elphinstone SWE is one of only three Lean training facilities of its kind in the Southern Hemisphere and the only facility in Australia.
 (3pm)

Max 10 per group. Drive your own trip

(Engineering: 4 x 45-50 min, transit time 5 min in Burnie and 20 min (Wynyard - Burnie)

Cost \$0

Requirements: closed-toe shoes. (Hi-vis vests and safety glasses will be provided by the hosts).

Excursion 5

Tasmanian Bush Food at Murnong Wild Food Garden

19 George St, Wynyard



An interactive guided walk through Murnong Wild Food garden, which features 115 of the over 150 native Tasmanian edible plants - which people can see, smell and taste. Rees Campbell will explain the current and historical culinary and medicinal uses of the plants. Participants will be able to pass on their knowledge of what plants were used locally by first Tasmanians and early settlers. Adding a culinary to the historical perspective increases student awareness of the lives lived by the people here before them. Students can be facilitated to more realistically envisage the way local food was sourced and used.

The value and fragility of the biodiversity of Tasmania's bush can be illustrated - with some endangered plants identified.

Rees will also present tastings of preserves and spices made with Tasmanian native foods. Hopefully the tour will inspire teachers to promote the wonderful botanical bounty possible in native edible gardens.

Min 5-Max15 per tour. Make your own way to destination. 10.00am (2hr excursion)

Cost \$20

More information will be sent to participants re trips once booking has taken place

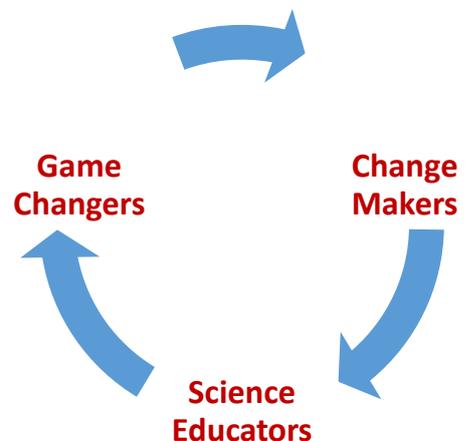
Call for workshops – Game Changers and Change Makers

Are you a science teacher / educator, laboratory technician and /or educational specialist?

Are you a game changer in Science education? Is your educational practice creating change in your school / in your community? Are you interested in sharing some of your knowledge, skills and practises, tried and tested gems or any other aspect of science education for the betterment of your teaching colleagues?

If yes, then please complete the attached form, scan and send to **workshop coordinator, Ann Burke** (aburke@mrc.tas.edu.au).

Submission **of workshop form will be required by Monday 5th March 2018.**



CONSTAT 2018 Workshop Proposal

Presenter/s details

Presenter 1

Title:

Given Name:

Family Name:

Address:

School /Organisation:

Phone:

Mobile

Email:

Presenter 2

Title:

Given Name:

Family Name:

Address:

School /Organisation:

Phone:

Mobile

Email:

Workshop details

Workshop title:

Appropriate audience (*eg primary, secondary, laboratory technicians, all*):

Brief description of session for program (*maximum 100 words*):

A short biography of presenter/s (*max 100 words*)

Resources required (*note only basic presentation equipment will be available. Workshop presenter/s will need to supply any other equipment they require*):

Special Requests/Needs/Room type (*eg, Science Lab, General Classroom, Wireless Access for delegates' own laptops, etc.*):

Are you happy to offer this workshop twice?

Yes / No

TAX INVOICE for REGISTRATION
STAT ABN: 97 660 939 433
Note: Please book conference registration by accessing:
<https://www.trybooking.com/book/event?eid=352163&>
REQUIREMENT: As well as registering online, please circle all EXCURSION/s selected and times, as relevant, on this page and scan it to: perviz.marker@education.tas.gov.au

Early Bird STAT Members (register before 19 March)	STAT Members - includes Friday evening dinner and Saturday conference (keynotes, workshops, trade displays, morning tea and lunch).	\$185.00
Full registration non-member (or register after 19th March)	Non-members of STAT and late registrations (after 19 March) - includes Friday evening dinner and Saturday conference (keynotes, workshops, trade displays, morning tea and lunch).	\$275.00
Student registration	STAT student members - Saturday keynotes and workshops only. Book dinner separately.	\$55.00
Dinner only	For dinner guests who wish to attend the dinner with a person paying for a full registration.	\$65.00
Friday: Excursion 1	A walk through geological time on the NW Coast 12.30pm	\$20.00
Friday: Excursion 2	Trees in the landscape – from seed to writing paper 9.30am	\$20.00
Friday: Excursion 3	Hellyer Road Distillery – Please circle time 10.30am 11.30am 2pm 3pm 4pm	\$18.00
Friday Excursion 4 Elphinstone Group Select any or all of 1,2,3,4 (Engineering: 4 x 45-50 min, transit time 5 min in Burnie and 20 min Wyn - Bur) Max 10 per tour Requirements: closed-toe shoes. (Hi-vis vests and safety glasses will be provided by the hosts).	Location #1: Elphinstone Pty Ltd Wynyard Manufacturing Facilities 11am _____ Location #2: Elphinstone Pty Ltd Burnie Facility 1pm _____ Location #3: Elphinstone Pty Ltd Refurbished Manufacturing Facility 2pm _____ Location #4: Elphinstone Simulated Work Environment 3pm	\$0.00
Friday Excursion 5	Tasmanian Bush Food at Murnong Wild Food Garden 10.00am	\$20.00
Saturday STAT Member	This ticket is for STAT members who are registering for Saturday only.	\$120.00
Workshop Provider	This rate is for workshop providers only, and includes dinner and Saturday conference with keynotes and workshops.	\$165.00

Convenors **Ann Burke (Marist Regional College)**
 Perviz Marker (Hellyer College)
Email: aburke@mrc.tas.edu.au
Email: perviz.marker@education.tas.gov.au