7:00-8:30

SESSION DETAILS

bit.ly/1jaSb5C

TUESDAY 4th february

SCANZ-ASC Breakfast Event #T1 Rydges South Bank

An **Evolution of science communication in Australia and New Zealand**

Pr This session will offer insights to the development of science communication in New Zealand and Australia. It will link research, good practice and the reality of practice by including speakers with backgrounds in academia, journalism and science communication. Speakers will provide insights on the development of science communication as both art form and academic discipline, including a timeline to the emergence of modern science communication in both countries, with supporting infrastructure, funding, events, organisations and festivals. It will also be an opportunity to celebrate and reflect on where we've come from and where we are at.

PRODUCER:
Christine Ross

FACILITATOR:
Jenni Metcalfe

SPEAKERS:
Ian Lowe

Toss Gascoigne

Jean Fleming

9:00-9:15

SESSION DETAILS

bit.ly/1eQk3sp

Visual fast forwards #T2 Auditorium

A taster from Sci-Art SPECTRUM exhibition

The visual fast forward session is designed to give you a snapshot of works in the SPECTRUM Science-Art Exhibition. Selected entrants will be given the stage and the audience for one minute with only one slide to creatively share their work and to entice the audience to visit them at their exhibit to learn more.

Vote for your favourite!

PRODUCERS AND SPEAKERS:
Kate Patterson

Signe Cane

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

9:15-9:45

SESSION DETAILS

bit.ly/LpgDTc

Plenary #T3 Auditorium

Seeing is believing: Why showing the nitty-gritty details is key to public engagement and excitement

Biology reveals the complex choreography of cells and molecules, but much of this science is too small to be directly observed or takes place at dynamic rates beyond our normal perception of time. 3D visualisation of cells and molecules has become an increasingly important component of exploring and communicating biological mechanisms to the public, students and scientific peers. Dynamic visualisations, such as animations, are able to synthesize diverse structural, dynamic and locational data derived from a variety of research sources and data sets, and can thus act as a visual hypothesis for a particular molecular or cellular process. Beyond the bench, 3D visualisations are powerful tools that are being used in classrooms and in the mass media to educate and entertain.

PRODUCER:
Kali Madden

SPEAKER:
Drew Berry

9:45-10:30

SESSION DETAILS

bit.ly/1czXN1c

TUESDAY 4th february

The value of visualisation in science communication — #T4 — Auditorium

Vi
Pr

What is the role of science-inspired art in science communication? ie. what is the cultural artistic value of science visualisation and how is this balanced with the monetary value and communicative value? Hear from the panel as they share their thoughts and experience on this, as well as how they approach balancing artistry and accuracy and, how to weave visualisation with words in practice and then quantifying value/ impact.

PRODUCER:
Kate Patterson

PRODUCERS/ FACILITATORS
Signe Cane

Tim Dean

PANELLISTS:
Drew Berry

Shilo McClean

Kate Patterson

Elizabeth Cerini

Mary Rosengren

Across the Tasman: Science communication in New Zealand — #T5 — Room B1

In
Pr

So what does happen in this not-so-far-away land? A great deal, it turns out. Science communication started in New Zealand over 20 years ago, and has changed considerably from the early days. From living as a scientist in the public eye, to teaching budding neuroscientists to communicate by engaging with everything from Wikipedia to parliamentary submissions, New Zealand science communicators are going from strength to strength.

PRODUCER:
Maia Sauren

PANELLISTS:
Siouxsie Wiles

Fabiana Kubke

CHAIR:
Christine Ross

Jean Fleming

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

9:45-10:30

TUESDAY 4th february

SESSION DETAILS

bit.ly/1czXN1c

St **Case studies and papers: Contributions of books to sci comm history, creative storytelling inspired by wrestling, igniting curiosity in pre-school children** #T6 Room B2

Im **Little Scientists: Science, Technology and Mathematics for Preschool Children**

SPEAKER: Christine Schneyer

In this session you will be introduced to the 'Little Scientists' initiative that was launched in Australia at the beginning of 2013.

'Little Scientists' is a not-for-profit initiative designed to facilitate children's curiosity for science, maths and technology through age-appropriate, fun and playful experiments already in their early years. Every education and care service that works with children from 3 to 6 years of age can join the programme and become an accredited "Little Scientists' House". Teachers and educators are trained through the initiative and encouraged to implement the programme together with the children in their care.

You will hear about the initiative's establishment in Germany in 2006, its success story by now and how the 'Little Scientists' offer a sustainable, long term solution to skill shortages in scientific, technological and mathematical professions.

This session will also give you information on how you can become a part of the initiative and help to make the programme available to all children across Australia.

'Little Scientists' is a not-for-profit initiative of FROEBEL Australia and the "Little Scientists' House Foundation" in Germany.

Blood, Body Slams and Biceps: Why Scientists should put down the pipettes and watch professional wrestling

SPEAKER: Steve Ting

For many scientists, reaching out to the public world can be daunting, difficult and an often frustrating exercise. It is a world filled with irrational thought, conspiracy and denialism - cold hard facts just don't cut it.

Science needs to learn a few lessons in effective communication though unconventional means. Science needs to put its feet up and learn from of the most successful forms of storytelling on the planet: professional wrestling.

I will use my knowledge of professional wrestling and background in the television industry to introduce you to the fundamentals of creative storytelling. I will show you that a well executed piledriver is more effective in sharing your message than a just another factoid.

Re **A little-known contribution in the history of science communication: Little Blue Books**

SPEAKER: Dr William Palmer

More than 500 million Little Blue Books with 2300 different titles were produced between 1919 and 1978 with the greater part of that production being prior to 1951. Little Blue Books covered a wide range of human interests but there were many Little Blue Books on science topics. These were not aimed at a technically competent audience, but rather at providing a general education to Americans at a very low price. This study will explain how Little Blue Books started, their scope generally, the areas of science covered, the quality of scientific information in Little Blue Books and some salient biographical background about the authors of Little Blue Books. Due to the enormous numbers of Little Blue Books printed, it is considered likely that they played a major role in the scientific education of American children and the scientific knowledge of adults between 1920 and 1950.

9:45-10:30

SESSION DETAILS

bit.ly/1czXN1c

Working with scientists in developing countries to communication science

#T7 Room B3

Im
Pr

This session will use the experiences of the speakers and specific case studies from Africa, Asia and the Pacific to look at how scientists working in developing countries can create the most impact from their research. This is particularly important given the goals of such research to help with food security and alleviate poverty. The session will provide insights for participants about the specific needs and opportunities for communicating science in developing countries.

PRODUCER:
Jenni Metcalfe

SPEAKERS:
Cathy Reade

Michelle Kovacevic

Toss Gascoigne

11:00-12:00

TUESDAY 4th february

SESSION DETAILS

bit.ly/1maOAlj

Hitchhiker's Guide to the Digital Universe #T8 Auditorium

Is Pr

For some time now, science on television has been an endangered species, with traditional outlets for science documentary disappearing like the arctic ice. Yet the appetite for science has never been greater – witness the explosion of blogs and podcasts across the digital universe. Everyone can be a broadcaster in this brave new world and the new generation of science communicators is spreading the word that geek is cool and science is awesome. From the classics to the quirky, from the landmark series to the one off little gem, The Hitch hikers Guide brings you the good, the bad and not so ugly world of science broadcasting 2013-4.

PRODUCER:
Alison Leigh

SPEAKERS:
Jenni Metcalfe

Bernie Hobbs

Communicating science through theatre: A new way to reach new audiences #T9 Room B1

Im Pr

If we argue that the public needs to be informed about science (e.g., Pedretti, 2002), then it is necessary to communicate science in an engaging and accessible manner. This can be achieved through the use of interactive theatre. Pedretti (2002) discussed the ability of drama to evoke emotional responses in audiences, arguing that emotional engagement creates a memorable experience.

In this session, we will:

- Discuss the theory underlying the use of theatre to communicate science, with a particular focus on engaging new audiences and arousing emotions;
- Present research on theatre featuring science demonstrations ('science shows') that aims to motivate and influence audience behaviour related to climate change and health (exciting demonstrations will be used to illustrate key points);
- Present a case study of "The Clock", an interactive theatre performance designed to engage regional Australian audiences with science in a way that is both accessible and entertaining;
- Discuss the evaluation of "The Clock" and its impact on audiences.

PRODUCER:
Jo Elliott

SPEAKER:
Jo Elliott

Graham Walker

Lisa Bailey

TUESDAY

11:00-12:00 SESSION DETAILS

bit.ly/1maOAlj

TUESDAY 4th february

St **Case studies and papers: Use of online and print media channels by scientists and communicators, local to international engagement** #T10 Room B2

In **Real Scientists: A case study of a rotational curation Twitter account to create engagement and access to science directly through social media**

Can social media play a role in maintaining and even increasing engagement with science, especially access to hard science, the kind of basic research carried out in laboratories? Taking a cue from successful, nation-based rotational curation accounts on Twitter, we created a rotational curation account for scientists, science communicators, writers and clinicians to tweet their work live. The aim of this account was to create a space for engagement in the real-time world of Twitter: to allow direct access to scientists, assist scientists in communicating their work to stakeholders and to display the breadth of careers available to science graduates.

After six months with over 26 scientists and communicators from five countries, the account has garnered over 5000 followers, has successfully translated live twitter engagement to engagement with primary schools, with media including regular interviews on radio and engagement with journalists, networking between scientists themselves and recruitment to other science communication platforms. We examine how the platform successfully increases engagement and reduces perceived inaccessibility of hard science through direct contact between the scientist and the lay public, and how the account functions as a resource for teachers, journalists and communicators. We consider how the project can be expanded and used to increase direct access to actual research performed by scientists.

SPEAKERS:
Upulie Divisekera

Sarah Keenihan

AUTHORS AND CONTRIBUTORS:
James Smith, Upulie Divisekera, Sarah Keenihan and Bernard Kealey

Re **What does the media mean to science? Expert use of media and media influence on public opinion in Australia**

We explored the interaction between science, public media channels and society in an evolving media landscape. We examined this interaction in three dimensions: scientists' personal use of public media channels to follow news and information about scientific issues; their assessment of the impact of scientific information in these channels on public opinion about science; and their assessment of the impact of such information on science-related decisions made by policymakers. We conducted an online survey with scientific researchers based at an Australian institution. Our results show that few Australian scientists source information about scientific issues from print media, differing from media use in the general Australian population. Australian scientists do not consume a lot of news and information about science in comparison to scientists surveyed in previous studies in the US and Germany. There was a difference in demographic consumption of media where those under 40 were more likely to use blogs and social networks. Scientists expected the general public and policymakers to use print, online and social media channels more often than they do, and they perceived these audiences to be susceptible to influence by media channels.

SPEAKER:
Vanessa Hill

11:00-12:00

TUESDAY 4th february

SESSION DETAILS

bit.ly/1maOAlj

St **Case studies and papers: Use of online and print media channels by scientists and communicators, local to international engagement** #T10 Room B2

Is **The value of blogging for a developing science writer: A case study**

SPEAKER: Sarah Keenihan

Although science blogs are popular amongst scientists and non-scientists, their value for professional career development remains a source of conjecture. Here I present a case study of a year-long science blogging project entitled ScienceforLife.365. Each day for 365 days between Australia's National Science Week in 2012 and 2013, I published a post and accompanying image to a wordpress site (scienceforlife365.wordpress.com) and a Facebook community (facebook.com/scienceforlife365) and shared through my personal twitter and Facebook accounts. Across the year, the blog had approximately 20,000 views across both platforms, with interest varying considerably between platforms and according to the subject of each post. Positive outcomes from the ScienceforLife.365 blogging project include:

- Developing a daily habit and discipline to write;
- Refining writing style and 'finding a voice';
- Seeing and working with nuances in audience preferences;
- Using social media to attract readership and market professional capabilities;
- Connecting with online writing and science communities;
- Demonstrating passion for subject matter and providing a portfolio for attracting paid work.

In summary, this case study shows that blogging can offer many benefits to the developing science writer.

In **Sharing science in local communities; a two pronged approach**

SPEAKER: Renee Sizer

The community wants to hear more science, learn more science and do more science. ScienceNetwork WA (SNWA) has used its capabilities to promote science at a very local level and across the globe through regional community science engagement.

In line with Inspiring Australia recommendation 13, "National Framework, Local Action", SNWA's online presentation of WA regional science, through local journalists and engaging regional community science groups has ensured science is being communicated from the ground up, while promoting its discussion and renewed focus within communities. We present the eight non-metropolitan areas of WA with locally specific science events, recounts of science activities on community pages and science information links in addition to our presentation of science news; covering a diverse range of topics from agriculture, environment, industry, social science and innovation.

Success in collaborating with regional newspaper editors to republish SNWA news stories in print has further encouraged science dialogue, while illustrating our ability to spark change in media processes. We recognise in remote and regional areas, community papers are widely read and central to the information sharing system. Delivery of science news and activity through both online and print avenues is working to compound science values in these communities and beyond.

11:00-12:00

SESSION DETAILS

bit.ly/1maOAlj

TUESDAY 4th february

From concept to screen: Navigating the animation process and getting the best results #T11 Room B3

Vi B I Pd

This session offers a unique inside view of the animation production process, getting right down to the nitty-gritty details. No matter what your involvement with animation is, the principles and practices shared in this workshop will prove valuable.

Visualising scientific concepts and stories has become increasingly important and popular. Animation offers one of the most effective and versatile mediums for achieving this. Understanding the process makes a huge difference to the resulting audience appreciation and how much fun you'll have making it.

In this workshop Adrian will unpack 15 years of running an animation business, selecting, employing, managing and directing teams of animators and visual-fx artists.

You will explore how to navigate the stages of animation production from initial concept all the way to the screen. You'll learn the ingredients to getting the job done on time, on budget and to everyone's satisfaction.

This session is for:

- Communicators wishing to use animation or visual effects to tell stories and convey messages
- Managers seeking to make efficient and effective use of the medium of animation.
- Professionals who need to work with animation companies or animators.
- Animators seeking to improve their project management skills.

PRODUCER AND SPEAKER:
Adrian King

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

12:15-12:45
SESSION DETAILS

bit.ly/1i5r1gs

Australian science and technical style manual update —Biotext bites the bullet at last! #T12 Room B3

Janet Salisbury, Rob Morrison and others have been promoting the idea of an Australian science style guide since the early 2000s. In 2007, this was discussed at a science editors 1-day workshop Janet ran as a satellite of the 2007 World Conference of Science Journalists in Melbourne. Various options were considered but never went ahead because of the enormous volunteer effort involved. Janet has also had similar discussions with the editing community — with the same enthusiastic response but no capacity for developing the manual.

Meanwhile, Biotext has been working at the coalface of science writing and editing and has developed its own inhouse science and technical style resources, which we are currently developing into a Australian science and technical style manual to bring to the market later in the year as a printed (book) and online resource.

It seems that this product requires a commercial basis (as evidenced by the fact that it has never go off the ground without it) and, after years of procrastinating, we are getting on with the job. However, to be a useful and respected Australian resource, we would like to engage with ASC and other science-based institutions, as we move through the final development stages.

At this very informal session, we will describe our concept and progress to date and discuss how ASC members can get involved in the next stages. It will also be a chance to air your pet likes and dislikes so as to ensure we include those in the manual.

SPEAKERS:

Janet Salisbury

Richard Stanford

Malini Devadas

12:30-13:00
SESSION DETAILS

SCERN Lunch meeting Downstairs café

The Science Communication Research and Education Network (SCREN) will be meeting informally at the ASC Conference from 12.30pm to 1pm during lunch on Tuesday 4 February at the meeting space downstairs in the cafe. All SCREN members and anyone interested in SCREN are invited to attend. SCREN is a forum for science communication researchers and educators from tertiary institutions to share best practices. Website: http://cpas.anu.edu.au/about-us/partnerships/science-communication-research-and-education-network-scren

13:15-14:00 SESSION DETAILS

bit.ly/1drkh7Y

The national engagement strategy, from Inspiring Australia to inspiring next door

#T13 Auditorium

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The Inspiring Australia Strategy is one of only a handful of national science engagement strategies in the world. Developed in consultation with a wide range of science communicators, educators, journalists and scientists in all states and territories, the strategy provides a platform for national coordination and leadership for science engagement across Australia. But how did the strategy get to where it is today, who is involved and what effect is it having?

Hear from Professor Allan Dale, Kylie Walker, and Keely Quinn in this interactive session which will be an opportunity to examine the strategy, to look at what has worked and what hasn't, as well thinking through how it could be improved.

Topics such as how the strategy came into place, how the national framework has been built, what online tools and training are being developed, how national grants are allocated, how the partnerships and infrastructure of the Inspiring Australia Programme were implemented, who is doing what under the programmes or what is evolving within the Science Sector Group are all up for discussion in this session. Bring your questions and ideas for this discussion with staff from the Inspiring Australia Programmes and communication and science representatives from other science agencies.

PRODUCERS:
Simon France

Claire Harris

SPEAKERS:
Allan Dale

Kylie Walker

Keely Quinn

Impact: Is the answer communication not commercialisation?

#T14 Room B1

Im
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Pr

As science communicators, our purpose is making science accessible for wider audiences. More than any other sector of the science community, we understand modern science's audiences are both multiple and diverse in their nature, with motivations ranging from curiosity to profit, and the meaning of life to its immediate preservation. Indeed, we can be seen as the true front-line of science - its interface for translation, uptake, interest and support. It is remarkable, then, that we are often least heard on questions of science impact, perhaps the issue where communication of science's multi-faceted nature is most vital. Impact is a complicated measure, often made political by its links to public funding, and by its connotations to values and fundamental beliefs. The continued emergence of science communication could offer a way forward that transcends both the traditions of the scientific method with its strictures of peer review citations, and the minefield that is higher education policy. What is our role in advocating a more complete understanding of the meaning of "impact", and more importantly, what could it be? This facilitated forum is the culmination of an online conversation in the months up to the conference ignited by a number of short popular and academic readings.

PRODUCER AND SPEAKER:
Fiona McNee

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

13:15-14:00 SESSION DETAILS

bit.ly/1drkh7Y

The emergence of modern science communication in Australia and New Zealand

#T15 Room B2

An Is Pr

How has modern science communication emerged in Australia in New Zealand? Thirty years science communicators were isolated, with few chances to discuss professional matters with colleagues. Their roles varied, from editing newsletters and annual reports, to writing media releases and organising displays and public tours. Their backgrounds reflected this: communication staff had backgrounds including teaching, journalism, science, librarianship, public relations...

There were no courses to train students in science communication, and little or no research in the area. The closest thing to a science communication event, ANZAAS, was entering a near-terminal decline. The notion of 'hands-on' was anathema to the science museums, which kept their specimens safely locked away in glass cases.

Now there are national and international associations for science communicators. There are journals and conferences. Four universities in Australia and New Zealand offer courses to Masters and PhD level. Science communication is recognised profession, with some debate whether it has moved from a legitimate field of study to a discipline.

So what changed? What were the crucial steps that have enabled the emergence of modern science communication? What were the forerunners, and how does the media fit in? By tracking the history, can we gain insights into a possible future?

PRODUCER:
Toss Gascoigne

MODERATOR:
Jenni Metcalfe

SPEAKERS:
Jean Fleming

Ian Lowe

Toss Gascoigne

TUESDAY

Getting published in science

#T16 Room B3

Im Re Pd

This session is for anyone who wants to know more about successful science publishing. Having worked in science journals and books for five years and handled thousands of manuscripts from submission to publication, I have picked up numerous hints and tips for would-be authors. The session will cover: preparing your manuscript (i.e., what to put in each section and effective use of figures and tables); choosing the right journal; and strategies for getting your paper past the editor. There will also be time for questions and discussion of attendees' experiences with publishing.

PRODUCER AND SPEAKER:
Hilary Hamnett

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

14:15-15:15

TUESDAY 4th february

SESSION DETAILS

bit.ly/1i5rhfq

St **Case studies and papers: Communicating in the mix of hard data, perceptions, advocacy and emotions** #T17 Auditorium

Campaigning the science: On the role of science in Greenpeace Australia Pacific

SPEAKER: David Ritter

Greenpeace is a science-based campaigning organisation whose purpose is to stand up for the environment. We detect and understand the environmental problems we face through science, and depend on science and technology to provide solutions to environmental threats. Greenpeace is thus in the (not-for-profit) business of communicating science. In his presentation, CEO of Greenpeace Australia Pacific, David Ritter, will outline Greenpeace's approach to science communication, drawing out some of the tensions and overlap between public science and public campaigning.

SciComm

SPEAKER: Matthew Cawood

Science communication rests on the primacy of fact, yet facts are only part of what drives human affairs. We are still strongly influenced by the emotions and instincts hard-wired into us by evolution. Despite Enlightenment hopes of a more rational world, irrationality - in less pejorative terms, the triumph of emotion over fact - still exerts a huge influence over human societies.

That throws up some anomalies that would have dismayed Enlightment thinkers. Climate change, a phenomenon whose existence is supported by record quantities of data, remains a fuzzy issue in the minds of many. That is not a fault of the science: there is a communication problem.

Marketers and politicians have long realised that "data dumps" are not effective at shifting perceptions. The most effective stories, whether they are told by advertisers, Hollywood or radio "shock jocks", engage emotions. So do the best science stories.

This presentation, more an enquiry than a lecture, looks at how perceptions are shaped, and looks at how short-form journalism might more deeply engage its audience through emotion.

14:15-15:15

TUESDAY 4th february

SESSION DETAILS

bit.ly/1i5rhfq

St **Case studies and papers: Better understanding audiences** #T18 Room B1

Re **What do the Australian public really, really think about science and technology?**

We know some people really, really like science and technology, and we know that some people really, really don't. But we do know enough about why? And as audiences and media continue to fragment, and people increasing follow only those media that support their own personal values, how do we best align our messages with audiences?

CSIRO has just completed a major study into public attitudes towards science and technology that builds on previous major studies conducted by the ANU, Victorian Government and Innovation Department, to dig deeper into the values that drive different attitudes. The study provides great insights into the key values that define different segments of the community, as well as preferred information channels. The data allows science communicators to better understand what messages, via which media, work best with different people by aligning with their key values.

SPEAKER:
Craig Cormick

Is **Understanding community concerns about hydraulic fracturing**

Hydraulic fracturing has been the focal point of widespread and global public debate. While the resources sector typically sees hydraulic fracturing as a low-risk method for accessing the coal seam and shale gas reserves required to meet growing public demand for energy, some in the community perceive it as an unmanageable and unacceptable risk. Concerns about hydraulic fracturing and the coal seam gas (CSG) industry include the health impacts of chemicals used, contamination of water supplies from fugitive gas after hydraulic fracturing, equity of land and water access, long term impacts on groundwater, and the full life cycle emission of greenhouse gases from CSG compared to that of coal.

In Australia, there has been an increase in coal seam gas (CSG) production over the last five or so years and in some cases this has occurred in locations that previously had no gas or oil production. The rapid growth in the CSG industry coupled with the concerns around the use of hydraulic fracturing has lowered community trust in the industry and government. This presentation highlights the main psychological drivers behind some of these concerns and a possible approach to effectively address them.

SPEAKER:
Tsuey Cham

AUTHORS AND CONTRIBUTORS:
Tsuey Cham
Peter Stone

Re **The role of listening in the reconceptualisation of climate communication**

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

14:15-15:15

SESSION DETAILS

bit.ly/1i5rhfq

TUESDAY 4th february

Case studies and papers: Better understanding audiences #hashtag Room B1

SPEAKER:
Luke Menzies

Despite sustained effort to communicate the reality of climate change (CC), public opinion in many developed countries remains unconvinced, uncertain and at worst skeptical and denialist. The implications of divided public opinion on effectively responding to CC have persisted and intensified overtime, with many scholars highlighting that action depends on widespread public recognition (Bain et al., 2012; Pidgeon, 2012; Pidgeon & Fischhoff, 2012).

Cook et al. (2013) recently reported the scientific consensus of CC (97.1%), and significantly that within the 2.9 percent of studies rejecting its human cause, opposition is waning. This sits at odds with recent research trends of falling public concern, increasing uncertainty, skepticism and denial in many countries, exemplifying the strain between climate science and society (Leiserwitz et al., 2011; Leviston et al., 2011; Tranter, 2011; Lowy Institute, 2013), and raising questions about the efficacy of CC communication.

Climate change is grounded in science but transformations of social practices are needed to enable mitigation and adaptation. With significant divides in public opinion and support for climate policies, greater understanding of associated social science and communication is fundamental to recognising the ambiguities, voids, and blind spots in our knowledge of social processes at play that may well exceed the complexities of CC itself (Hulme, 2010). Focus must shift from the current 'science first' paradigm to the cultural, psychological and political barriers and processes, listening is core to this, allowing insight into these factors that ultimately influence decisions.

Echoing Pidgeon's (2012) call for "a fundamental revision of our conceptualisation of what it is to do climate risk communication," this presentation will discuss the role of listening in this reconceptualisation.

Is **Insights Into audiences: An overview of how theories of human behaviour can improve the effectiveness of science communication**

SPEAKER:
Vicki Martin

AUTHORS AND CONTRIBUTORS:
Vicki Martin
David Lloyd
Les Christidis

The effectiveness of science communication strategies can be improved through better understanding of the audience (Stern, 2011). This is often difficult for those charged with communicating science due to a lack of time, resources or expertise, resulting in ad hoc, untargeted communication (Nisbet & Scheufele, 2009). However, greater collaboration with the social sciences can help science communicators draw from research in this area to understand how people interpret and act upon scientific information.

Social scientists use theories of human behaviour to understand factors that influence behaviour. We can apply these theories to investigate the factors contributing to the target audiences' motivation to engage with science – or not. The Theory of Planned Behaviour (Ajzen, 1991) is the most widely applied methodological framework which identifies the beliefs, attitudes and intentions that lead to behaviour. Many other fields have used this theory to conduct audience studies for the development of persuasive communication strategies, but so far very few applications of the theory exist in science communication. This paper discusses the application of the theory to science communication and how such in-depth audience research can be used to better understand psychological mechanisms that are important to communication processes. By embracing social research, science communicators will be in a better position to develop communication strategies which enhance engagement with their intended audiences.

St **Case studies and papers: online communities of practice, science represented on stamps, what impedes scientists communicating?** #T19 Room B2

Im **@ASTA_online: Engaging teachers of Science with online technologies**

SPEAKER:
Nigel Mitchell

Since April 2011 the Australian Science Teachers Association (ASTA) has been developing resources and working to equip teachers of Science throughout Australia to benefit from online technologies in their teaching and professional development. The project has included engagement through social media, webinars, and face to face workshops. ASTA has engaged with other organisations including DEEWR and Education Services Australia to develop and promote online resources and to host these online. A current major project is Science ASSIST, a helpline and FAQ service to assist teachers and school laboratory technicians which will be beta tested during early 2014 and officially launched in July. A portal website using Moodle has been developed as the keystone of the project, and all other elements are linked through the portal.

This paper will include a description and demonstration of the ASTA_online project, as an example of science communication targeted to a particular and strategically significant group within society. The paper will include an outline of the strategies that have been found successful, some that have not, and future plans for the project through 2014 and beyond.

In **An online community of practice around science communication: #onsci**

SPEAKER:
Heather Bray

AUTHORS AND CONTRIBUTORS:
Heather Bray, Sarah Keenihan, James Huston and Kristin Alford

#onsci is a twitter hashtag and monthly chat session originally created to continue and extend conversations 'on science' stemming from the Inspiring Australia conference of 2011 (see http://bridge8.wordpress.com/2012/01/30/onsci/ for more information). Each month, participants are invited to join a hosted hour-long twitter conversation on topical matters relating to science communication, education, policy, research, marketing and more. Interested parties also use the #onsci tag to share relevant resources and conduct conversations outside of designated chat times.

With approximately 50 participants per session (mostly Australian but also some internationals) in 25 chats, #onsci has been highly successful in providing a forum for those interested in science communication to come together, share ideas and develop their personal and professional networks. #onsci has also contributed to the development of science policy via a submission to the McKeon Review, and teaching of science communication in Australia through informal associations with courses taught at Universities and online.

This presentation will consider effectiveness of #onsci as an online community of practice around science communication, and consider how future iterations might shape the practice of science communication in Australia.

St **Case studies and papers: online communities of practice, science represented on stamps, what impedes scientists communicating?** #T19 Room B2

Conversations with science giants

SPEAKER:
Diana Jasudasen

AUTHORS AND CONTRIBUTORS:
Diana Jasudasen
Nancy Longnecker

This study explored the views of eminent Western Australian scientists about science communication and provides insights into factors that motivate or deter them from communicating their science with society.

Semi-structured, face-to-face interviews were conducted with 17 winners and finalists of the Western Australian Scientist of the Year, Early Career Scientist of the Year Awards and eminent scientists who have been inducted into the WA Science Awards Hall of Fame. Most interviewees were current university academics. Interviews were audio recorded, transcribed in full and analysed.

All participants reported thinking that science communication is important and valuable to society. The most commonly reported constraint to their communication was lack of time:

> *"Time is the biggest barrier...and everything else that is swallowing my time."*

Many interviewees also noted that the current academic structure discourages scientists from communicating with the general public as much as they would like to:

> *"We're now getting more and more constrained to...bring in enough grants, publish enough papers...in the top ranked journals. There's nothing about communicating your science"*

We discuss respondents' views about the benefits of communicating with society and make a case for explicit reward for effective science communication by scientists in academic and other research workplaces.

Re **The representation of science and scientists on postage stamps**

SPEAKER:
Christopher Yardley

No-one has studied science on postage stamps as a communication medium. Yet stamps incorporate a literate and a visual communication message that governments have used to elucidate ideological ideals and policies, for civic education, for nation building and to advise on matters of public health. Within every stamp image is a permanent record that preserves that message information from the date of issue through many generations.

I explore paths and into how and why a country visualises and publicises its place locally and to the outside world.

'Science' as represented on postage stamps defines the state of science and technology at a set point in time, the date of issue, and provides a commentary on society and a set of activities, functions or needs. Events and anniversaries are the prompts for many issues. Government's hand is shown when the message is political, is nation-building and often in advice of public health issues.

This study analyses how, through stamp issue, the current perspective of science is shown by the context in step with the movement understood as the public understanding of science evolving into the public awareness of science.

14:15-15:15

SESSION DETAILS

bit.ly/1i5rhfq

Editing scientific content (part 1) #T20 Room B3

Is
Pd

All science communicators need editing skills to edit their own or other people's work. By the end of this three-hour workshop, you will understand the three stages of the editing process that professional editors use:

Substantive editing — In part one we will discuss methods to analyse the structure and substance of a piece of writing. We will look at individual paragraphs, explaining how to ensure that a paragraph contains one idea and that the sentences in the paragraph flow logically. We will also look at individual sentences and discuss tips for identifying common errors in writing.

(See Part Two and Three for more exciting content!)

PRODUCER AND SPEAKER:
Malini Devadas

15:45-16:45

SESSION DETAILS

bit.ly/LphS4C

Developing the evidence base: Inspiring Australia Supported Research

#T21 Auditorium

Im
St

This session will provide an update on the four projects that were undertaken with support from Inspiring Australia to develop the evidence base about science engagement in Australia:

- Project A: National Audit of Science Engagement Activity
- Project B: Collation of Science Engagement Data Across Australia;
- Project C: Understanding the Australian Evidence Base for Science Engagement and
- Project D: Determining impact of science engagement to help define and guide best practice.

In Project A, a snapshot national audit of science engagement activities around Australia was conducted in 2012. Data collected in the audit were analysed to compare the qualitative and quantitative data and discover the actual nature of the engagement taking place. Most Australian science engagement is still in either 'first order' (one-way communication from scientist to public) or 'second order' (dialogue between scientists and the public) modes of engagement. Options for increasing third order engagement of the public with science in Australia will be discussed.

Project B identified 140 peer reviewed articles about science engagement in Australia that were published between 1982 and 2011. Topics of climate change, biotechnology and health and medical issues dominate recent publications of science communication. 55 national studies have been identified that were between 1988 and 2013 and determine Australian public attitudes towards science and science-related issues.

Project C has encompassed a wide range of activities, including description of case studies to provide vignettes about the impact of public engagement activities, production and implementation of a national survey of Australians' attitudes and behaviour relating to engagement with the sciences, development of an interactive website that provides access to data collected and tools produced and collating national data on the role of media in science engagement.

Project D produced the Inspiring Australia Evaluation Resource Kit which includes a package of evaluation tools which allows collection of nationally comparable data as well as event-specific data. An overview of results of data collected at various events and selected case studies will be presented. Key measurables that can be used to provide evidence of effective science engagement will be discussed.

Using a combination of data collected in all the projects, Project C also involves exploring the gaps between theory and practice, identifying case studies that exemplify best practice and providing access to this information via an interactive website. The website is a work in progress and science communicators are invited to add information and provide feedback.

PRODUCER:
Nancy Longnecker

MODERATOR:
Léonie Rennie

AUTHORS/PRESENTERS:
Nancy Longnecker
Jenni Metcalfe
Sue Stocklmayer
Suzette Searle
Joan Leach
Fabien Medvecky
Jo Elliott
Léonie Rennie

15:45-16:45

SESSION DETAILS

bit.ly/LphS4C

TUESDAY 4th february

Knowledge brokering in Australia: Influencing policy and practice — #T22 — Room B1

Im Re Pr

This session will bring together current and potential knowledge brokers, practitioners and researchers, for presentations from influential speakers, and a mini-write-shop on best-practice in influencing policy and practice. Researchers, practitioners and policy makers will be paired for lively presentations about their experiences — what works in the research-into-policy arena, research use or non-use and knowledge brokerage. Although knowledge brokerage is becoming recognised as a field of practice and an area ripe for academic study, knowledge brokers have tended to operate in isolation from each other, particularly in Australia. A network and community of practice to bring together knowledge brokers to discuss theory and practice is overdue. The potential for a national network will be explored in the second part of the session.

PRODUCER:
Eve Merton

SPEAKERS:
Stefan Kaufman

Jean Palutikof

Liam Smith

Suzanne Long

Dorean Erhart

Inspiring Australia's Digital Engagement sessions — #T23 — Room B2

Is Pr

1. Digital strategies

2. Are you a digital optimist or pessimist?

Irrespective of whether you're a government organisation, from private industry or an individual the digital space is a key element of strategic and operational activity. The force of the digital impact on many facets of business operations, human resource management, corporate knowledge, web and social interactions etc, will need to be tightly bound to your major vision, objective and strategic statements. In the session we will review the elements of a good digital strategy highlighting the diverse impacts that it can have within an organisation.

Awareness, consideration, favourability and loyalty to your message are not just a matter of quality information. There are approximately 50 major concepts to consider in obtaining a quality digital product whether it is a website, blog or app. The top 15 of these will be reviewed in terms of evidence based reasoning rather than accepting hype and urban myths.

PRODUCER:
Jayne Fenton Keane

SPEAKER:
David Keane

Editing scientific content (part 2) — #T20 — Room B3

Is Pd

Copyediting (1 hour) — In part two we will look at how to create and follow an editorial style guide. We will discuss current trends in capitalisation, punctuation and spelling as well as issues unique to science writing.

(See Part Three for more exciting content)

PRODUCER AND SPEAKER:
Malini Devadas

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

17:00-18:00 SESSION DETAILS

bit.ly/1kGonzE

TUESDAY 4th february

Case studies: On-ground Inspiring Australia projects #T24 Auditorium

Im Pr

This session will feature short presentations highlighting detailed case studies by people involved in Inspiring Australia activities across the nation. A Q&A session will allow you to explore these and other aspects of Inspiring Australia in more detail.

Case studies from the impact of the Expert Working Groups, Unlocking Australia's Potential Grants and National Science Week, to the importance of building partnerships and relationships across states and territories.

PRODUCERS:
Simon France

Claire Harris

SPEAKERS:
Jackie Randles

Keely Quinn

Kylie Walker

Case studies and papers : Science-art, engagement events #T25 Room B1

Is

The Science of chocolate or the art of chocolate: what's in a word?

Inspiring Australia (IA) aims to engage all Australians with science. Many people in the Victorian community express an interest in science and technology but don't actively seek it out or search for information about science. The following is a case-study of an attempt to attract a science-disengaged audience to a science-art event.

We worked with the community group Laneway Learning which coordinates a series of evening 'classes' in a multitude of subjects. We ran two such identical classes, one titled 'The Science and Art of Chocolate' and one titled 'The Art of Delicious Chocolate.' Importantly, the content of each session was identical and each was advertised in the same way. Following the session short evaluation sheets, again identical, were filled in by event participants. In this presentation we will present the profile of the participants from each class and suggest that, in order to engage the science-disengaged, we need to consider the impact of the word 'science' when promoting events and engagement opportunities to attract a less engaged audience. Self-explanatory? Perhaps, but how often do we practise what we preach?

SPEAKER:
Carly Siebentritt

AUTHORS AND CONTRIBUTORS:
Carly Siebentritt
Chris Krishna-Pillay

TUESDAY

Use the bitly links to go direct to the online information for each session

Theme
Is Insight · Im Impact · In Innovation · Vi Visualisation · An Anniversary · Re Research

Career audience
B Beginner · I Intermediate · A Advanced

Type
Pr Produced session · St Series of talks · Pd Professional development

17:00-18:00 TUESDAY 4th february

SESSION DETAILS

bit.ly/1kGonzE

Case studies and papers : Science-art, engagement events #T25 Room B1

Is

Insight Radical: Where science meets art

SPEAKER:
Renee Beale

In 2012 the ARC Centre of Excellence for Free Radical Chemistry and Biotechnology initiated a project, called Insight Radical, to give the public an alternative way to approach the science of free radicals and encourage people to think about them with more freedom and creativity.

The main objective of Insight Radical is to create a dialogue about free radicals between scientists and artists, then tell this story to the community via a series of exhibitions and public workshops.

Six Australian artists - Tony Lloyd, Steve Lopes, Anna Madeleine, Natalie O'Connor, Peter Sharp, and Ruth Waller - were invited to complete residencies in the Free Radical Centre's laboratories in Melbourne, and respond by creating works for exhibition.

Insight Radical opened in August 2013 at the Griffin Gallery, London, and will begin its Australian tour at MCLEMOI Gallery in Sydney at the end of November 2013. Workshops have been held in Broken Hill, Cairns, Canberra and Newcastle with further planned for Alice Springs and South Australia.

I'm a Scientist: Get me Engaged

SPEAKER:
Dervise Halil

CONTRIBUTORS:
Dervise Halil
Kristin Alford
James Huston

I'm a Scientist, Get Me Out of Here! is a two-week online program where students ask scientists questions through forums and live text-based chats. The students then vote for their favourite scientist, and the scientists are evicted one by one until there is a winner! The winning scientist receives $1,000 to spend on further public outreach.

I'm a Scientist has been running in the UK for five years. Since 2011, Bridge8 has delivered five I'm a Scientist events across Australia, engaging 75 scientists and 4000 students from across 60 schools. The event is specifically designed to be student-led inquiry, to highlight general appreciation of science as well as STEM careers and to provide a platform for organisations and scientists to engage with schools. Feedback from participants indicates it also meets other objectives including improving communication skills, engaging disengaged students and building confidence. The online environment also allows engagement to be quantified.

This presentation, based on the submitted poster will demonstrate how I'm a Scientist, Get Me Out of Here! meets a diverse range of needs for students, teachers, scientists and institutions across multiple goals in STEM and public engagement.

In

Cafe Scientifique: A case study in innovative science talks

SPEAKER:
Jayne Fenton Keane

This session discusses the design, delivery and evaluation of the Café Scientifique Program rolled out through Queensland's Inspiring Australia Program. The session presents a case study that shares details of how and why the series was designed and delivered in its current format and the opportunities that emerge from it for science communicators. Those interested in transforming science talks into public events will be provided with insights into audience reception of the cafes to use for planning their events. Café Scientifique in Queensland is using an innovative approach to science engagement and building an evidence base for science talks held in partnership with Inspiring Australia.

TUESDAY

17:00-18:00

TUESDAY 4th february

SESSION DETAILS

bit.ly/1kGonzE

Case studies and papers: Films, theatre, YouTube, interactive digital learning #T26 Room B2

Vi

Youth-produced films relating science and culture

SPEAKER:
Mzamose Gondwe

AUTHORS AND CONTRIBUTORS:
Mzamose Gondwe
Nancy Longnecker

Visualisation through the process of filmmaking can enable dialogue and deeper understanding of connections between science and culture. Our research explores the process and effect on young people of producing films that connect science and culture. Students from three schools, two in Western Australia and one in Malawi, Africa participated in this study. Participants were provided with filmmaking equipment and taught how to shoot and edit films. Working individually or in small groups students produced short films on their interpretation of the connection between science and culture. Films were shown during a community screening where family and friends were invited. Following the screening, students and teachers were interviewed. Analysis of interviews and the films students produced revealed that linking science to community, family and out of school activities empowered these students to see science as accessible and relevant to their everyday lives. Filmmaking on science and culture motivated and engaged students and enhanced relationships between families and schools. In future use of this activity, scaffolding and guidance should be provided to guide investigation of the connections between science and culture. In the context of multicultural Australia, students researching, documenting and sharing stories of science and culture, may promote meaningful intercultural understanding.

Is

The Art of Science: The role of theatre and performance in getting the message across

SPEAKER:
Michael Mills

In a multi-media presentation, that includes several excepts from a number of recent performances, the role of music and theatre is explored in how it can illicit key emotional responses in its target audience. Music, in particular, has a key role to play in anchoring memories and engaging an audience in ways that no other art form can. Utilising music and theatre is consequently an extremely powerful tool in science communication. Through Heaps Good Productions, Michael Mills has developed a significant body of work in communicating scientific concepts and inspiring audiences to engage in science. This presentation will explore the role and kinds of performance, and how they can be used, as a part of science communication and citizen science programmes. It will include work Michael has been involved with in a range of scientific and cultural institutions, as well as recent work he's been engaged with as part of his new role as an Adjunct Research Associate at the Barbara Hardy Institute. With performances by several of Michael's most successful characters, including singing palaeontologist Professor Flint, this presentation will provide both a theoretical base for its central thesis, and a memorable theatrical experience for conference delegates. And as with all good theatre, will leave the audience wanting for more!

17:00-18:00 TUESDAY 4th february

SESSION DETAILS

bit.ly/1kGonzE

Case studies and papers: Films, theatre, YouTube, interactive digital learning #T26 Room B2

Im

Can we change behaviour using YouTube?

SPEAKER:
Miriam Sullivan

AUTHORS AND CONTRIBUTORS:
Miriam Sullivan
Nancy Longnecker

Youtube videos are commonly used to communicate science to the general public. However, there is little evidence to show whether short, entertaining videos actually have any impact on viewer behaviour.

We conducted an innovative experiment to measure the impact of short Youtube clips on aquarium owners care of their pet fish. Two 50-second videos were created, one that was positively framed and one that was negatively framed.

Results showed that participants (n=197) who did not watch a video did not improve their aquarium care in the following month, even when they had intended to. Watching either one of the videos significantly improved aquarium care, but only if the viewer had a pre-existing intention to do so. There was no difference in behaviour between the positive and negatively framed videos, but participants who watched the positive video had increased recall and understanding of the key message.

Our research suggests that Youtube videos about pet care should be positively framed and target people who wish to change their behaviour but have not yet taken action on those intentions.

Vi

Creating an interactive Chemistry World- from concept to prototype

SPEAKERS:
Anne Brant

Sherwin Huang

The Cube, at QUT's Garden Point campus, is one of the world's largest digital interactive learning and display spaces. Part science lab, part digital engagement, the Cube aims to be the hub of scientific exploration for high school students, the QUT community and the wider public.

The demand for authentic and useful learning experiences using digital technologies is increasing all the time. The introduction of the Australian Curriculum has presented the opportunity to develop new and innovative technologies to support education and learning in the classroom. As part of QUT's commitment to work with high schools and support the introduction of the new Australian Curriculum, the concept of a Chemistry World was proposed to provide an interactive learning tool for students and the community.

This presentation will take you on a journey of how a curriculum-linked digital, interactive chemistry application for The Cube has progressed from concept to project prototype. It will outline the consultation process, the range of stakeholders that have participated in the project so far, and share some of the difficulties and the challenges encountered to meet the needs and demands for education and entertainment.

The chemistry world prototype will be available for participants to engage with and participants will be given the opportunity to become "user testers" and provide feedback and input into the final development stage of the project.

17:00-18:00

SESSION DETAILS

bit.ly/1kGonzE

Editing Scientific Content (part 3) #T20 Room B3

Is Pd

Proofreading – In part three we will discuss the proofreading process and practise hardcopy markup (including discussion of proofreading symbols).

PRODUCER AND SPEAKER:
Malini Devadas

19:00-21:00

SESSION DETAILS

bit.ly/KnfJFc

ASC2014 Conference Dinner #T27 Boulevard Room

Special guest speakers, the Unsung Hero of Australian Science Communication Award

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PRODUCERS:
Kali Madden

Claire Harris

MC:
Robyn Williams

Science Cabaret Entertainment

Sci. com. gets emotional

We've all felt interested, but what's actually going on in our head when we experience different emotions like interest, enjoyment, surprise and curiosity? And how can we use these emotions to create more engaging science communication? This fun and interactive cabaret act will bring these emotions to life using a series of astonishing demonstrations – from water that appears to defy gravity through to vacuum cleaner powered marshmallow bazookas! We'll also share insights into the theory and psychology that underpins these emotions, which was the presenter's PhD topic.

PRODUCER:
Phil Dooley

PERFORMERS:
Graham Walker

Grass should be Purple - A sciencey fairytale. The great story tellers of our culture, literature and religion are not constrained by facts or truth. Phil Dooley explores whether science needs to be, either, as he explores the wonderful colours of our world.

Phil Dooley

Get set to travel back to a time when dinosaurs ruled the Earth; when dinosaurs walked across this ancient land. Prepare to join an interactive musical adventure with Prof Flint and discover some of the the unique, prehistoric animals that are part of the Australian story.

Professor Flint (aka Michael Mills)

TUESDAY