



# SHOWCASING STEM IN GEOGRAPHY

Geography is as an 'interdisciplinary discipline'; it spans the sciences, humanities and social sciences. However, the scope and relevance of geography is often compromised through its positioning in curriculum development and school organisation structures as a subject only of the humanities and social sciences.

To strengthen understanding about the interdisciplinary nature of geography, *Showcasing STEM in geography* is designed to prompt thinking about the way in which geography is taught and presented to students, colleagues and the school community. The decadal plan for geography recommends there be formal recognition in policy and practice of geography as a STEM subject. The journey towards such recognition requires an informed, consistent approach. In the first instance, it is important for such recognition to occur in geography classrooms and for geography teachers to make clear to their students where geography becomes visible and contributes to what is known as the 'STEM field' and 'STEM education'.

*Showcasing STEM in geography* is an **online symposium** that brings together the academic and education communities over **two non-consecutive days**, with the purpose of exploring how STEM can be emphasised in geographical teaching, learning and assessment in alignment with the syllabus. Each session will go for 1 hour 15 minutes and comprise a presentation, Q&A time, a teacher panel response, and time to annotate/further develop teaching and learning programs. Each presenter will provide **pre-reading material** to support their presentation and form the foundation of the panel response.

Upon registration to the symposium, delegates will have the opportunity to **nominate themselves as a panel respondent** for a designated session. The accreditation process is underway. **Registrations will open on Monday 16 May 2022.** Please contact [gta.admin@ptcnsw.edu.au](mailto:gta.admin@ptcnsw.edu.au) for further information.

We look forward to welcoming you to this event

Dr Susan Caldis, President GTANSW & ACT | 2020 STEM Ambassador, geography education (Symposium Chair);  
Stephanie Boden, Councillor GTANSW & ACT; James Harte, Councillor GTANSW & ACT; Katerina Stojanovski,  
Vice President GTANSW & ACT (Symposium Co-Chairs)

## COST

One day attendance (includes access to recordings):

Members: \$200; Non-members: \$300; Pre-service teachers / Concession: \$80

Two day attendance (includes access to recordings):

Members: \$380; Non-members: \$580; Pre-service teachers / Concession: \$100

You can pre-register for the course by:

- direct CC payment at <https://www.openlearning.com/ptc-nsw/courses/stem2022/> for each day (for discount inquiries, please email [gta.elearning@gmail.com](mailto:gta.elearning@gmail.com))
- or, if you want your school to pay for you, follow the instructions at [shorturl.at/goJJ4](http://shorturl.at/goJJ4) to organise an invoice now.

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## SYMPOSIUM PROGRAM – DAYS ONE & TWO

TIME	FRIDAY 27 MAY 2022	FRIDAY 3 JUNE 2022
8.30am – 8.45am	GTANSW & ACT team to meet and do a quick run through	GTANSW & ACT team to meet and do a quick run through
8.45am – 9.00am	JOINING THE EVENT	
9.00am – 9.15am	Acknowledgement of Country; Introductions, opening remarks	Acknowledgement of Country; Introductions, opening remarks
<b>SESSION 1</b> 9.15am – 10.30am	Syllabus focus: Landscapes and Landforms Title of session: Understanding the processes, technologies and career pathways associated with the formation, transformation and management of coastal landscapes and landforms Presenter: Assoc Prof Hannah Power, University of Newcastle	Syllabus focus: Sustainable Biomes Title of session: The role of community food economies in promoting sustainable development across Australia and the Asia region Presenter: Dr Ann Hill, Senior Lecturer, University of Canberra
15 minute break		
<b>SESSION 2</b> 10.45am – 12.00pm	Syllabus focus: Environmental Management and Change Title of session: Citizen science for informing management strategies and health checks of the Great Barrier Reef Presenter: Prof Steven Turton, Central Queensland University	Syllabus focus: Environmental Management and Change Title of session: Hope and grief in the geography classroom – implications for teaching about and reflecting on climate change focused content Presenter: Assoc Prof Natascha Klocker, University of Wollongong
12.00pm – 12.15pm	360info project and writing for the Geography Bulletin	360info project and writing for the Geography Bulletin
30 minute break		
<b>SESSION 3</b> 12.45pm – 2.00pm	Syllabus focus: Sustainable Biomes Title of session: Problem solving and critical thinking targeting climate change and COVID-19 on food and nutrition security in the Asia Pacific region Presenters: Cathy Reade, The Crawford Fund and Heather MacDonald, Education Partnerships and Crawford Fund NextGen Researchers	Syllabus focus: Landscapes and Landforms   Environmental Management and Change Draft title of session: Utilising technologies and activating spatial cognition to understand the nature and impact of environmental change amongst First Nation communities in polar regions Presenter: Prof Lynn Moorman, Mount Royal University, Canada
15 minute break		
<b>SESSION 4</b> 2.15pm – 3.30pm	Syllabus focus: Environmental Management and Change – Draft title of session: Regenerating Australia video and teaching resource Presenters: Adela Kasur, Mark Drummond and Hamish Curry, Education Team, Cool Australia	Syllabus focus: Water in the World Draft title of session: Fieldwork around the school grounds with a physical geography emphasis Presenter: Kathy Jones, geography teacher and Director, Fieldwork Connections
3.30pm – 3.45pm	AGTA Careers website and Careers Posters	AGTA Careers website and Careers Posters
3.45pm – 4.00pm	Evaluation and close	Evaluation and close

### PLEASE NOTE

*This symposium will be recorded and made available only to those who register. Due to ongoing COVID-19 uncertainties and other unforeseen circumstances, the order and content of this program is subject to change.*

SEE OVER FOR PRESENTER BIBLIOGRAPHIES

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## SELECTED PRESENTER BIBLIOGRAPHIES

Further information will be available soon

### **Associate Professor Hannah Power, University of Newcastle**

Dr Hannah Power has over ten years of experience working as a coastal and marine scientist and is an Associate Professor in the School of Environmental and Life Sciences at the University of Newcastle. Hannah has expertise in the processes and landforms of coastal environments and conducts research into waves, tides, and currents on coastlines. Her research also investigates how landforms, such as beaches, estuaries, and coral reefs, change through time. Hannah also conducts research into coastal hazards such as tsunamis and wave overtopping of rock platforms. Hannah holds a PhD (Coastal Engineering) from the University of Queensland and a B Sc (Marine Science) (Honours I) from the University of Sydney. Hannah is a Science Technology Australia 2021 Superstar of STEM and was awarded the NSW Young Tall Poppy Award in 2021. Hannah is the founder of the Australasian Young Coastal Scientists and Engineers Conference series which aims to connect, foster, and showcase the next generation of coastal scientists and engineers. Hannah is also a member of the NSW Coastal Council, an independent expert panel that provides advice to the Minister on coastal issues and management.

### **Professor Steven Turton, Adjunct Professor, Central Queensland University and University of the Sunshine Coast**

Dr Steve Turton is a Councillor of the Royal Geographical Society of Queensland (RGSQ) and the Independent Chair of the Wet Tropics Waterways Partnership. He lives on the Sunshine Coast, where he is Adjunct Professor of Environmental Geography at Central Queensland University and the University of the Sunshine Coast. From 2006-2016, he held several senior roles as a Professor of Geography at James Cook University in Cairns, including Director of Research for the Rainforest Cooperative Research Centre. Steve is a former Councillor of the Institute of Australian Geographers and a former member of the Wet Tropics Management Authority's Scientific Advisory Committee. He is a Past President of the Australian Council of Environmental Deans and Directors, Past-President of the Institute of Australian Geographers and Past-Chair of the National Committee for Geographical Sciences, Australian Academy of Science. In 2016, Steve was appointed as a Distinguished Fellow of the Institute of Australian Geographers, and in 2017 was delighted to receive the RGSQ's J.P. Thomson Medal, recognising outstanding contributions to geography. He is currently an associate editor of Geographical Research.

Steve's research and teaching interests include tropical climatology and climate change, rainforest disturbance ecology (esp. due to tropical cyclones), the adaptation of tourism, agriculture, forestry and natural resource management sectors to climate change. He has published widely in these areas of study. Steve was an expert reviewer for the 5th and 6th IPCC Assessment Reports (Working Group 2, Impacts and Adaptation). His sole-authored book, *Surviving the Climate Crisis: Australian Perspectives and Solutions* (CRC Press, Taylor-Francis, UK), is to be published this July.

### **Dr Ann Hill, Senior Lecturer, University of Canberra**

Dr Ann Hill is a Senior Lecturer and researcher in community education and community development for a more sustainable world and part of the University of Canberra (UC) Centre for Sustainable Communities and the UC Future of Food in the Capital Region network. She is a human geographer and diverse economies scholar by training and has specific interests in collective ethics and methods for living in a climate and resource changing world. She currently works with communities in Australia's SE rural-urban fringe and in Manila and Mindanao, the Philippines, on growing community food economies, among other things. Prior to academia she worked in different research and education fields including 10 years' experience as a high school humanities (HSIE) teacher in southwest Sydney, and time spent as a health and nutrition consultant for Russell's Natural Food Markets and as an agricultural technical officer for University of Sydney's plant breeding institute.