# QUIZ NIGHT INTELLIGENCE

5:30 PM	REGISTRATION - PERTH MESS HALL				
6:00 PM	ROUND TOPIC: HOW WELL DO YOU KNOW YOUR BLUE BACKYARD HOST: MINDEROO FOUNDATION				
6:10 PM	GAME 1				
6:15 PM	ROUND TOPIC: PHYSICS, CHEM & ENGINEERING HOST: MURDOCH UNIVERSITY				
6:25 PM	GAME 2				
6:35 PM	ROUND TOPIC: BIODIVERSITY HOST: WA BIODIVERSITY SCIENCE INSTITUTE & REWILD PERTH				
6:45 PM	BONUS ROUND				
6:50 PM	MARKING & ANSWERS				
7:00 PM	BREAK				
7:40 PM	ROUND TOPIC: GENERAL (STEM) KNOWLEDGE HOST: PARTICLE				
7:50 PM	BONUS ROUND				
7:55 PM	ROUND TOPIC: SURPRISE LAST ROUND HOST: BAMBOOZLED				
8:05 PM	MARKING & ANSWERS				
8:15 PM	WINNERS ANNOUNCEMENTS AND PRIZES				
8:30 PM	END OF EVENT				



## **ANTI-CONFERENCE: INNOVATION**

# **MORNING SESSIONS**



8:30 AM

**REGISTRATION - GROUND FLOOR, HACKETT HALL** 

9:00 AM

**WELCOME - MAIN STAGE - HACKETT HALL** 

9:10 AM

Pratik Shrestha - Aurecon, Rachel Newsome - Murdoch University, Dr Paul Hancock - Australian Space Data Analysis Facility

PANEL DISCUSSION: INNOVATING LAND, SEA AND SPACE

**Hackett Hall** 

9:40 AM

10 MINUTE INTERCHANGE =

9:50 AM

## CRYSTALLOGRAPHY MATTERS, I WANT TO SQUEEZE YOUR CRYSTALS!

The University of Western Australia

Hackett Hall

COMPLICATED SOLUTIONS TO SIMPLE PROBLEMS

Peel Bright Minds

Woodside Learning Studio 1

10:25 AM

10 MINUTE INTERCHANGE -

10:35 AM

Australian Space Data Analysis Facility

**Hackett Hall** 

**ASTROQUEST** 

BACTERIA BATTLE ROYALE: THE ANTIBIOTIC SHOWDOWN

Telethon Kids Institute
Woodside Learning Studio 1

11:10 AM

10 MINUTE INTERCHANGE

11:20 AM

### TRAVELLING BACK IN TIME

WA Organic & Isotope Geochemistry Centre

**Hackett Hall** 

**ARMAGEDDON OR MIRACLE?** 

**Edith Cowan University** 

Woodside Learning Studio 1

11:55 AM

**5 MINUTE INTERCHANGE** 

12.00PM

FIRESIDE CHAT: POWERING FUTURE INDUSTRIES

Emily Kendall, Holly Escott, Jason Hart Sustainable Energy Now

**Hackett Hall** 

12:30 PM

**END OF MORNING STREAM** 







# **AFTERNOON SESSIONS**

1:05 PM	REGISTRATION - GROUND FLOOR, HACKETT HALL					
1:25 PM	WELCOME - MAIN STAGE, HACKETT HALL					
	PANEL DISCUSSION: INSPIRING WESTERN AUSTRALIA					
1:35 PM	Fathima Haseen - Pawsey, Dr Paige Maroni - Minderoo-UWA Deep-Sea Research Centre,					
	Carol Inness AM and Shahnaz Rind - Danjoo Koorliny  Hackett Hall					
2:05 PM	10 MINUTE INTERCHANGE					
2.001 111	EXPLORING OCEAN DEPTHS	CONTAGIOUS	CURIOSITY: A	SHOW AND TELL WITH CLEVER		
2:15 PM	Minderoo-UWA Deep-Sea	COLLABORATIVE JO THE SCIENCE		QUOKKAS		
L. 101 III	Research Centre	Telethon Ki	ds Institute	Forrest Research Foundation		
O.EO DM	Hackett Hall Woodside Learning Studio 3 Woodside Learning Studio 1					
2:50 PM	10 MINUTE INTERCHANGE					
	WHO'S THAT ASTRONOMER?	MARINE SCIEN	TIST ROULETTE	DRONES, CODING AND AI		
3:00 PM	Curtin Institute of Radio Astronomy (CIRA)	Forrest Resear	ch Foundation	Squadrone		
	Hackett Hall	Woodside Lea	rning Studio 3	Woodside Learning Studio 1		
3:35 PM	10 MINUTE INTERCHANGE					
	FINDING ALIENS ANI	D LOVE	QUANTUI	QUANTUM GAMES AND COMPUTING		
3:45 PM	The University of Western Australia <b>Hackett Hall</b>			Quantum Girls		
			Woodside Learning Studio 1			
4:20 PM	5 MINUTE INTERCHANGE					
	THE BIOINFORMATICS BREAKDOWN					
4.25 PM						
0	Centre for Applied Bioinformatics  Hackett Hall					
		Usalia	++ Uall			
		Hacke	ett Hall			





**END OF AFTERNOON STREAM** 

5:00 PM

### **ANTI-CONFERENCE: INNOVATION**

### PANEL DISCUSSION: INNOVATING LAND, SEA AND SPACE

Patrik Shrestha - Aurecon, Rachel Newsome - Murdoch University, Dr Paul Hancock - Australian Space Data Analysis Facility.

9.10am - 9.40am Hackett Hall

Our expert speakers will share their insights on advancements in space data analysis, robotics, and marine technology. From the vastness of space to a world-first in construction, to the mysteries of marine life, we'll delve into the forefront of innovation and its impact on Western Australia.

### CRYSTALLOGRAPHY MATTERS, I WANT TO SQUEEZE YOUR CRYSTALS!

Dr Stephen Moggach - The University of Western Australia

9.50am - 10.25am Hackett Hall

Ever wondered how we know what molecules look like? How carbon capture technologies are developed? How we make better batteries? Or even know what proteins and viruses look like? Stephen has spent the last 20 years studying and teaching these techniques all over the world!

Join him in discovering the crystallisation of supersaturated solutions, how lasers are used to show diffraction, or jump up on stage as a human prop to explain scale, crystal packing and porous materials.

### COMPLICATED SOLUTIONS TO SIMPLE PROBLEMS

Lilijana Nicholls - Peel Bright Minds

9.50am - 10.25am Woodside Learning Studios

Throughout history humans have developed devices to make things easier, turning once difficult procedures into simple everyday tasks. Taking inspiration from Rube Goldberg, an American cartoonist, inventor, and engineer who is famous for drawing cartoons that depict overly complicated machines that perform very simple tasks, you'll be challenged to make a balloon popping machine.

#### **ASTROQUEST**

Calving Pang & Leigh Tyers - Australian Space Data Analysis Facility

10.35am - 11.10am Hackett Hall

In a space-themed game show, teams of contestants will embark on a virtual tour of some of WA's top space facilities. With your team, complete challenges to earn the most points! Learn about WA's leading space industry while competing to win.

This session requires participants and spectators... which one will you be!?



### **ANTI-CONFERENCE: INNOVATION**

### BACTERIA BATTLE ROYALE: THE ANTIBIOTIC SHOWDOWN

Bonnie Hyatt - Telethon Kids Institute

10.35am - 11.10am Woodside Learning Studios

In this unique workshop, you'll run a mock antibiotic susceptibility test using real agar. Embark on an engaging journey to test four different "microbes" on your plates.

Discover the power of these tests as you analyse the results and advise your clinician on the most effective treatment for each "infection." It's a battle of wits as you become a scientific advisor, strategizing to combat antibiotic resistance. Prepare to be inspired as you learn about the game-changing potential of rapid diagnostics in the fight against antibiotic resistance.

### TRAVELLING BACK IN TIME

WA Organic & Isotope Geochemistry Centre (WA-OIGC) - Curtin University

11.20am - 11.55am Hackett Hall

Step back in time and join WA-OIGC's interactive gameshow! Take the stage and embark on an exciting adventure through prehistoric life.

From attempting to draw ancient creatures based million-year-old fossils to deciphering true or false facts, and even putting together puzzle of a dinosaur skull, there's plenty of fun to keep everyone guessing. Audience members get to participate too by voting for the best masterpiece or closest answer.

#### ARMAGEDDON OR MIRACLE?

Elliot Rosignoli - School of Science, Edith Cowan University

11.20am - 11.55am Woodside Learning Studios

When do individual liberties outweigh public security? This question reveals complex ethical dilemmas. Technological innovations offer revolutionary benefits, but lax restrictions can lead to privacy concerns.

In this session you'll debate for or against technological innovations in cybersecurity and intelligence industries, will technology or ethics win? Come and find out.

#### PANEL DISCUSSION: POWERING FUTURE INDUSTRIES

Sustainable Energy Now

12.00pm - 12.30pm Hackett Hall

So, you know what renewable energy sources are out there, and what the purpose of them is. But how do we get from where we are now to an economy that relies on and embraces renewable technologies? Join our panellists to learn about what's next in the clean energy transition and how we can all play a part.



### PANEL DISCUSSION: INSPIRING WESTERN AUSTRALIA

Fathima Haseen - Pawsey, Dr Paige Maroni - Minderoo - UWA Deep-Sea Research Centre, Carol Innes and Shanaz Rind - Danjoo Koorliny

1.35pm - 2.10pm Hackett Hall

In this discussion we'll be joined by the woman developing the knowledge and skills to harness High Performance Computing at Australia's most powerful public research supercomputing facilities, Australia's deepest diving Australian woman and two women driving an Aboriginal led movement. Hear about how passion can be combined with a career and prepare to be inspired!

### **EXPLORING OCEAN DEPTHS**

Minderoo-UWA Deep-Sea Research Centre

2.15pm - 2.50pm Hackett Hall

Explore the wonders of the ocean depths like never before and learn about a newly discovered species! Immerse yourself in mesmerising deep-sea footage and witness the cutting-edge technology used to unravel the inhabitants of the deep during this interactive talk.

### CONTAGIOUS CURIOSITY: A COLLABORATIVE JOURNEY THROUGH THE SCIENCE OF INFECTION

Wesfarmers Centre of Vaccines and Infectious Diseases - Telethon Kids Institute

2.15pm - 2.50pm Woodside Learning Studios

Have you ever wondered who decides how an infectious disease is managed? Or how you can contribute to research without being a test subject? In this workshop, you'll discover what community involvement means for disease management by becoming the researcher!

Facilitated by our experts, work as a team to provide input on each aspect of the research design process and work towards a research project plan that considers the whole body, and importantly, the person living with the disease.

### SHOW AND TELL WITH CLEVER QUOKKAS

Forrest Research Foundation

2.15pm - 2.50pm Woodside Learning Studios

Explore the fascinating journeys into the world of science and have a friendly chat with PhD scholars from Forrest Research Foundation.

Each scholar will captivate you with their research through an item or activity in small group settings. Get hands-on with objects like field-collected microplastics, 3D printed coral models, or immerse yourself in a virtual reality experience with a cool headset. Finally, each group will have the opportunity to present their object or activity to others, using their own words to explain the incredible science behind it!



### WHO'S THAT ASTRONOMER?

Curtin Institute of Radio Astronomy Research (CIRA)

3.00pm - 3.35pm Hackett Hall

Radio Astronomy sounds like an industry reserved for the top scientists, but is it as difficult to forge a career in as you'd think? Hear about some of the most unexpected pathways taken by CIRA's team members in this gameshow-style event. Learn about the diverse and transferable skills found in the field of Radio Astronomy.

There will be opportunities to ask the team questions and learn more about what they do!

### DRONES, CODING AND AI

Roberto Lujan Rocha - SquaDrone

3.00pm - 3.35pm Woodside Learning Studios

In this workshop, learn about programming drones through coding! Learn the fundamentals of coding on your own device and explore how it relates to fields such as AI, spatial science, the principles of flying a drone, and the various real-world applications of drone technology.

This workshop is suitable for those with little to no exposure to coding or intermediate-level participants with some coding knowledge.

#### MARINE SCIENTIST ROULETTE

Forrest Research Foundation

3.00pm - 3.35pm Woodside Learning Studios

It's time to scrub up on your speed dating skills! In this session you'll move between six of the Forrest Research Foundation's brightest Marine Scientists. With only five minutes to hear about their fascinating research you'll be kept on your toes.

#### FINDING ALIENS... AND LOVE

Dr David Gozzard - The University of Western Australia / International Centre for Radio Astronomy Research (ICRAR)

3.45pm - 4.20pm Hackett Hall

Join David Gozzard, a physicist developing new technologies for communications and sensing by firing lasers into space! Prepare to laugh your equations off during this session, where he will demonstrate the power of estimation in physics to find extra-terrestrial intelligence in the galaxy and romantic partners in a big city, presented as a comedy routine.





### **OUANTUM GAMES AND COMPUTING**

Ann Backhaus and John Tanner - The Quantum Girls Team

3.45pm - 4.20pm Woodside Learning Studios

Unravel Quantum computing through this beginner-friendly game: Schrödinger's Pets!

In this game tournament the core quantum concepts of superposition, entanglement and measurement will be demonstrated. Learn how these core concepts are harnessed by quantum computers and play to qualify for the championship round.

This session is led by Pawsey Supercomputing Research Centre's Education and Training Manager and UWA PhD Candidate researching quantum maching learning.

### THE BIOINFORMATICS BREAKDOWN

Centre for Applied Bioinformatics - The University of Western Australia

4.25pm - 5.00pm Hackett Hall

In the final session of the Anti-conference we'll be entertained by interviews with five bioinformatics experts, talking about their groundbreaking research and what attracted them to the field.

After the interviews you'll be able to ask the experts questions about what it means to research bioinformatics how its technological advancements infuse several aspects of our daily lives.

### THANK YOU TO OUR SPONSORS FOR MAKING THIS EVENT POSSIBLE!

This event is brought to you by Inspiring WA and the WA Coordinating Committee for National Science Week and coordinated by Partner & Prosper.

The Inspiring WA program is proudly supported by an Inspiring Australia National Network grant, The Department of Jobs, Tourism, Science and Innovation, and is hosted by Scitech.

Sponsors of National Science Week include: ChemCentre, CSIRO, Curtin University, Edith Cowan University, Engineers Australia - WA, Minderoo Foundation, Murdoch University, Stan Perron Charitable Foundation, The University of Western Australia, Western Australian Museum.

Supporters of National Science Week include: Australian Science Communicators - WA, Perth NRM, Science Teacher's Association of WA and Telethon Kids Institute.



























