



ST PATRICK'S COLLEGE
TOWNSVILLE

#STEMLIKEAPATSGIRL CONFERENCE SATURDAY, 21 AUGUST 2021

EVENT DETAILS:

Event: #STEMLIKEAPATSGIRL CONFERENCE 2021
When: Saturday, 21 August
Where: St Patrick's College Townsville
45 The Strand
Townsville QLD 4810
(Entry via Fryer Street; exit via Convent gates, The Strand)
Arrival time: Between 8.40am – 8.55am
Wear: Closed-in shoes and hat
Bring: Water bottle (clearly labelled)

Once you have completed check-in, you will receive your #STEMLIKEAPATSGIRL 2021 T-shirt and you will wear this for the remainder of the day.

REGISTRATIONS:

Registrations for the #STEMLIKEAPATSGIRL 2021 will open on Saturday, 19 June at 9.00am.

1. Go to: <https://www.eventbrite.com.au/>
2. Search for: #STEMLIKEAPATSGIRL
3. Complete your registration through Eventbrite. As soon as you click "Show Tickets" an email with your tickets will be sent to your nominated email address.

#STEMLIKEAPATSGIRL 2021 CONFERENCE SCHEDULE:

TIME	ACTIVITY	LOCATION
8.30am – 8.45am	Participant arrival and registration, including QR check-in	Fryer Street entrance
9.00am	Keynote address <i>Parents/Guardians are welcome to stay for this address.</i>	Auditorium
10.00am	Icebreaker activities	Sports Complex
10.30am	Morning Tea	Café by the Sea
11.00am	Workshop round 1	Location as per workshop
12.30pm	Lunch	Café by the Sea
1.00pm	Workshop round 2	Location as per workshop
2.30pm	Q & A Panel	Auditorium
3.00pm	Close	Exit via Convent gates (Strand)



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WORKSHOPS:

- In 2021, #STEMLIKEAPATSGIRL is offering 11 different workshops to choose from! Read through these workshop notes to decide your preference.
- Participants will select an order for preference for ALL workshops using letters A – K (for example: J, B, K, A, D, E, H, C, I, F, G)
- On the day, participants will attend TWO workshops. We will endeavour to match preferences where possible.

WORKSHOP NO.	WORKSHOP INFORMATION
A ENGINEERING FOR HUMANITARIANISM	<p>WORKSHOP FACILITATORS: Lieutenant Jake Van De Broek (ADF) WORKSHOP LOCATION: A13/14</p> <p>The workshop will replicate a Humanitarian and Disaster Relief Mission (HADR) and you will face key challenges when planning and executing this task.</p> <p>There will be a focus on the immediate need to provide shelter, access to fresh water for consumption and medical facilities, as well as planning for the provision of this aid to the population in need.</p> <p>A swift response to natural disasters is key in the affected area's recovery and assists the population in returning to some form of normalcy post-incident. Can you meet this challenge?</p>
B COUNTER-EXPLOSIVE HAZARDS	<p>WORKSHOP FACILITATOR: Lieutenant Morgan Emmett (ADF) WORKSHOP LOCATION: BEACHFRONT</p> <p><i>NB: Counter-explosive dogs will be used in this workshop. Do not select this workshop if you are allergic to dogs or if you are scared of dogs.</i></p> <p>This workshop places you in the role of a Combat Engineer. It will focus on honing your search capabilities on uncovering dangerous objects that may be placed in the ground by adversaries.</p> <p>The workshop will explain the science and technology behind explosives that lie beneath the surface, how to detect them, how to interrogate and how to collect evidence.</p> <p>Utilising science and technology, we can create a safe path for soldiers and civilians to walk upon. Will you be able to search and uncover these threats?</p>



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<p>C</p> <p>THE SECRET LIFE OF TURTLES AND SHARKS</p>	<p>WORKSHOP FACILITATOR: Dr Janine Sheaves & Dr David Bourne (JCU) WORKSHOP LOCATION: A01 + courtyard</p> <p>This workshop will help you understand the complex behaviours of turtles and sharks, such as:</p> <ul style="list-style-type: none">• What biotic and abiotic factors affect the survival of sea turtle adults and babies?• Sharks - friend or foe?• Migration patterns and habits of whales, sharks and turtles – where do they go, how do they do it and why do they migrate in the first place?
<p>D</p> <p>FORENSIC ANATOMY</p>	<p>WORKSHOP FACILITATOR: Dr Alex Trollope (JCU) WORKSHOP LOCATION: A03/A04</p> <p>Human bones have been discovered in the outback. Your job is to provide the police with as much information about these bones as possible.</p> <ul style="list-style-type: none">• What bones are present?• Can you work out if they were an adult or child, a man or a woman?• How old were they when they died?• How tall were they?• Did they die a natural or violent death? <p>This workshop will investigate just how much information our bones can tell us. We will explore the anatomy of bones, including their microscopic structure.</p>
<p>E</p> <p>BEHIND THE SCENES OF HEALTHCARE – WHAT IS PATHOLOGY?</p>	<p>WORKSHOP FACILITATOR: Katelyn Stanhope (Townsville Hospital) WORKSHOP LOCATION: A12</p> <p>Have you ever had a blood sample taken? Or a COVID-19 test? Have you ever wondered what happens to your sample after it is collected? This workshop will take you behind the scenes of our healthcare system and into the world of the pathology laboratory.</p> <p>Pathology testing is used by doctors to diagnose and monitor diseases in their patients. Around 70% of medical decisions made by doctors are based on pathology testing. This workshop will cover different disciplines within pathology, including:</p> <ul style="list-style-type: none">• Blood Banking – providing life saving blood products to critically ill patients• Microbiology – identifying which microorganism is causing infection• Chemical Pathology – monitoring electrolytes, hormones, drugs, and enzymes• Haematology – the study of blood cells and diagnosis of leukaemia and lymphoma.



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<p>F</p> <p>REEF RECOVERY AND RESTORATION</p>	<p>WORKSHOP FACILITATOR: Nathan Cook (Reef Ecological) WORKSHOP LOCATION: B12/B13</p> <p>A popular island and reef important to the local community is devastated by a cyclone. You are a Reef Ecologist brought in to help coordinate a swift response to this natural disaster. Your job is to implement appropriate recovery activities.</p> <p>Will you be able to prevent any further damage to one of the world's greatest ecological miracles?</p>
<p>G</p> <p>JUNK PILE ENGINEERS</p>	<p>WORKSHOP FACILITATOR: Cran Middlecoat (It's Rocket Science) WORKSHOP LOCATION: CONVENT LAWN</p> <p>In this workshop, you will explore real-life applications to space science, future problem solving and engineering innovations using the platform of rocketry and space science.</p> <p>Our applied design and project-based STEM challenges require you to develop an understanding of Newton's Three Laws of Motion, forces, energy, engineering concepts and prototyping, design technologies and science inquiry skills.</p> <p>You will design, build and launch rockets made from sustainable technology.</p>
<p>H</p> <p>USING MATHS AT THE SCENE OF THE CRIME</p>	<p>WORKSHOP FACILITATOR: Sergeant Mark Knopes (Queensland Police) WORKSHOP LOCATION: SPORTS PRECINCT</p> <p>You are a member of the Queensland Police Crash Unit Squad and have attended a crash scene involving two vehicles. One vehicle (Unit 1) has crashed into the rear of another vehicle (Unit 2).</p> <p>Your job is to carefully observe the scene, measure tyre marks, check the tyre friction marks left prior to impact, test the sobriety of the driver and ascertain whether Unit 1 was travelling the speed limit or speeding.</p>
<p>I</p> <p>IT'S A DISASTER!</p>	<p>WORKSHOP FACILITATOR: Paul Cannon (TCC with QFES) WORKSHOP LOCATION: B23/B24</p> <p>A menacing low is forming in the Coral Sea off Townsville, what is the potential impact for the community?</p> <ul style="list-style-type: none"> • When is it likely to impact? • What can we do to prepare? • Will people need to evacuate? • Where will they go? <p>This workshop will investigate the characteristics, impacts and effects of a Severe Tropical Cyclone on Townsville. You will look at ways to better understand cyclone risks and become better prepared and more resilient as a community.</p>



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<p>J</p> <p>DETECTING THE UNSEEN: BLACK HOLES AND DARK MATTER</p>	<p>WORKSHOP FACILITATOR: Jackie Bondell (ARC Centre of Excellence with Swindale University)</p> <p>WORKSHOP LOCATION: E13/E14</p> <p>How can we observe that which we cannot see?</p> <p>With a focus on working as a team to solve a series of mystery boxes, you will be asked to make observations, build evidence and then apply both creative and critical thinking skills to solve your mystery box challenges.</p>
<p>K</p> <p>CRIME SCENE INVESTIGATION</p>	<p>WORKSHOP FACILITATORS: Senior Sergeant Kate Taylor and Senior Constable Bridget Uriarte (Townsville Police Forensic Services)</p> <p>WORKSHOP LOCATION: B11 + outdoor landing</p> <p>The workshop will give you an insight into the world of forensic crime scene examination. You will learn from real crime scene examiners, about forensic evidence, such as fingerprints, blood, DNA and shoe impressions, and the tools and techniques used to locate, detect, record and collect evidence.</p> <p>With your new-found skills you will then enter a crime scene as a forensic examiner and test your skills. Will you find all the evidence? Do you have what it takes to be a crime scene examiner?</p>

T-SHIRT SIZING

Before you look at booking your ticket, please check this sizing guide. **If in doubt, go up a size.**

SUBLIMATED T-SHIRT / SINGLETs / POLO SHIRTS SIZE CHART

KIDS	Size 0	Size 2	Size 4	Size 6	Size 8	Size 10	Size 12	Size 14	Size 16				
Across Chest (Flat Seam To Seam)	29.5cm	32cm	34.5cm	37cm	39.5cm	42cm	44.5cm	47cm	49.5cm				
Length	44cm	47cm	50cm	53cm	56cm	59cm	62cm	65cm	68cm				
LADIES	Size 6	Size 8	Size 10	Size 12	Size 14	Size 16	Size 18	Size 20					
Across Chest (Flat Seam To Seam)	41cm	43.5cm	46cm	48.5cm	50.5cm	53cm	55.5cm	58cm					
Waist (Flat Seam To Seam)	35.5cm	38cm	41.5cm	44cm	46.5cm	49cm	51.5cm	54cm					
Length	58cm	60cm	62cm	64cm	66cm	68cm	70cm	72cm					
MEN'S/UNISEX	XS	S	M	L	XL	2XL	3XL	4XL	5XL	6XL	7XL	8XL	9XL
Across Chest (Flat Seam To Seam)	49.5cm	52cm	54.5cm	57cm	59.5cm	62cm	67cm	72cm	78cm	83cm	88cm	93cm	98cm
Length	68cm	70cm	72cm	74cm	76cm	78cm	82cm	84cm	86cm	88cm	88cm	88cm	88cm