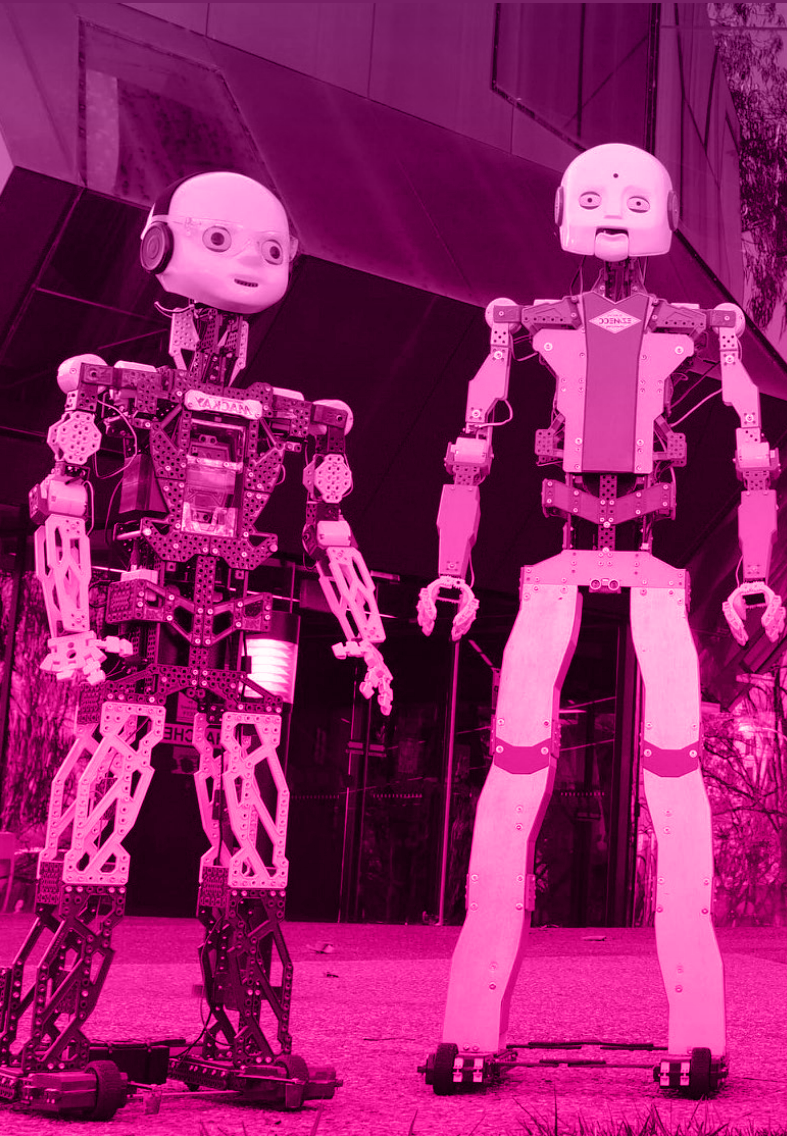
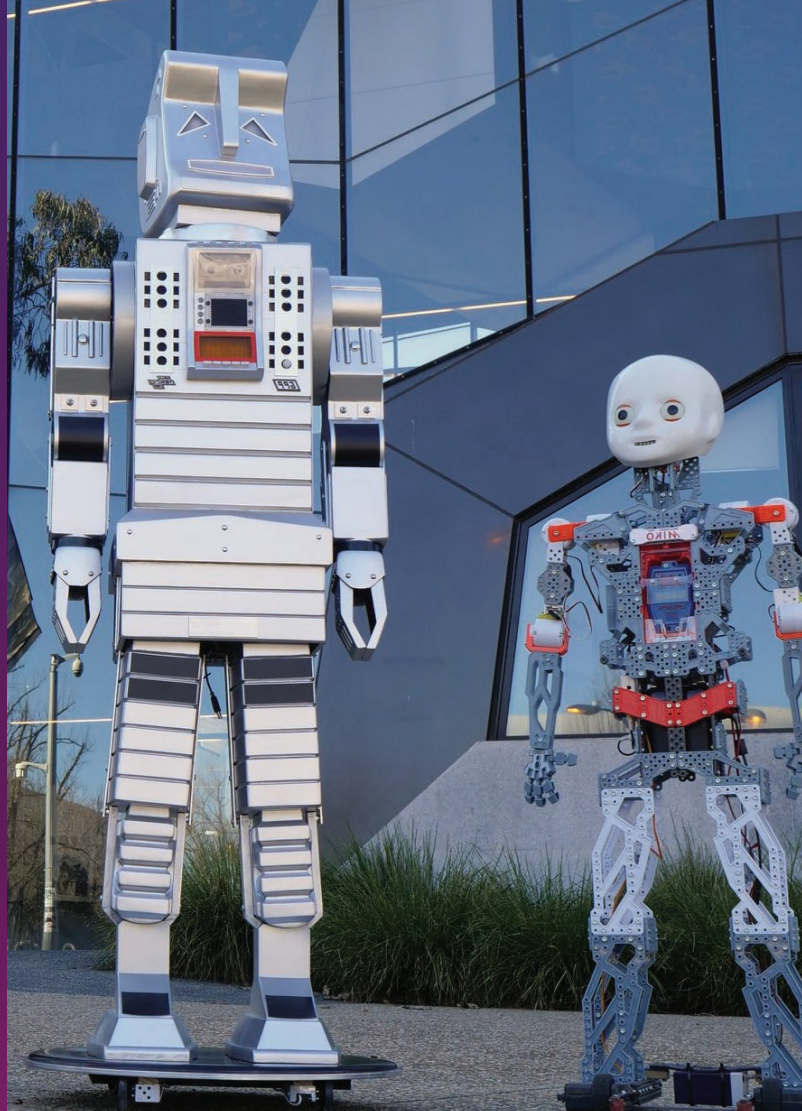


# OUT OF THIS WORLD TEACHER PD!



## COSPAR-K

A FREE Space STEM Event

29 Jan - 2 Feb 2021

ICC Sydney & Virtual

[www.cospar2021.org/stem](http://www.cospar2021.org/stem)

In partnership with



Education



COSPAR-K has a five-day Space STEM Speaker Spectacular for you! Blast off to the ICC Sydney and kick start the 2021 school year with a burst of jet power. Delivered in partnership with the **NSW Department of Education's STEM Industry School Partnerships (SISP) Program**, this event will be an experience like no other.

### BOOK YOUR TICKETS TODAY

[stem@cospar2021.org](mailto:stem@cospar2021.org)  
[cospar2021.org/stem](http://cospar2021.org/stem)

    
#cospark2021



# WHAT'S IN STORE?

## KEYNOTES



**Emily Calandrelli**  
The Space Gal  
Emily's Wonder Lab  
on NetFlix



**Dr Andy Aldrin**  
CEO Aldrin Family  
Foundation



**Corey Tutt**  
Deadly Science Founder &  
2020 NSW Young Australian of  
the Year



**Dr Christyl Johnson**  
NASA Goddard  
Space Centre



**Dr Adrian Brown**  
NASA Mars 2020  
Rover Mission



**Professor Lisa  
Harvey Smith**  
Australian Government  
Women in STEM Ambassador



**Professor Phil Bland**  
Space and Planetary Science  
Curtin University



**Professor Russell Boyce**  
Director of UNSW  
Canberra Space



**Dr Rosa Doran**  
Global STEM  
Education Expert



**Andreas Antoniadis**  
Director Saber Astronautics  
Australia



**Colonel Pam Melroy**  
NASA Space Shuttle  
Commander



# POWER TALKS

Presented by STEM teachers, students and space professionals, the program will include incredible topics such as:

- Space camp activities for the classroom
- Launching rockets in high schools
- Ideas to clean up space junk
- Student pathways for a career in space
- Space education programs
- How to start a space company



## PANEL DISCUSSIONS

### The Space Race

Australia's space sector is accelerating faster than anywhere on Earth. How will we recruit the STEM workforce so that Australia can fully reach its full potential in space? In this panel, hear from our experts on Australia's accelerated pathway in the world's space industry and how we will develop our future space workforce.

### Engaging the Best Talent

In order for space and STEM industries to thrive in Australia, we need to develop our own sovereign talent pool. Engaging with and developing our high potential students throughout their education journey will be key to developing this home-grown talent. In this panel, hear from our experts in the field of high potential gifted education and how these programs are working to develop highly capable talent pools.

### NSW Space to Grow

The sky is no longer the limit. Space represents a new frontier for industry, research, employment and economic development. Today's space industry is full of opportunities that can improve citizens lives every day and in this panel we will discuss why Australia has one of the fastest growing space industries.

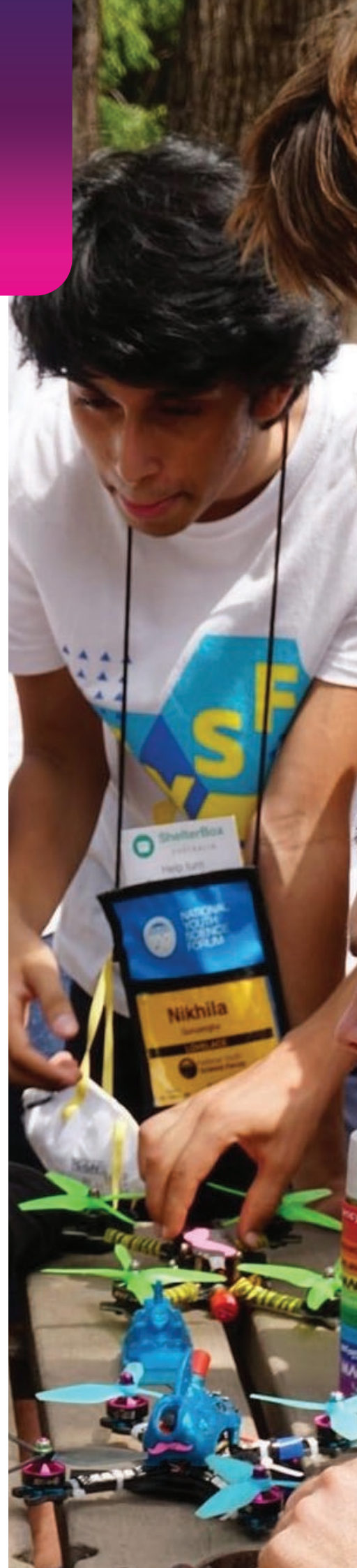




# Day 1

## Friday 29 January 2021

9:30am - 10:00am	Arrival, Check-in & Welcome
10:00am - 10:15am	Official COSPAR-K Opening
10:15am - 10:45am	<b>Keynote</b> <b>Emily Calandrelli</b> The Space Gal
10:45am - 11:00am	Power Talk
11:00am - 11:15am	Power Talk
11:15am - 11:30am	<b>From Woomera to Andoya, Launching Rockets in High School</b> <b>Amelia Travers</b> Avid Research
11:30am - 11:45am	<b>Engaging Year 8 Students to Design Sustainable Life on Mars!</b> <b>Dana Quick</b> Chatswood High School
11:45am - 12:00pm	<b>Space Junk Clean Up</b> <b>Anneli Cole</b> Questacon
12:00pm - 1:00pm	<b>BREAK</b>
1:00pm - 1:30pm	Arrival, Check-in & Welcome
1:30pm - 1:45pm	<b>Design for Human Habitation in Space</b> <b>Michael Myers</b> Re-engineering Australia Foundation Ltd
1:45pm - 2:00pm	<b>Monash Nova Rover - Students Building Robots</b> <b>Harrison Verrios</b> Monash University Nova Rover team
2:00pm - 2:15pm	<b>5 Surprising Frontiers</b> <b>Heather Catchpole</b> Refraction Media
2:15pm - 2:45pm	<b>Keynote</b> <b>Russell Boyce</b> UNSW Canberra Space
2:45pm - 3:45pm	<b>Panel Discussion</b> <b>The Space Race</b>



# Day 2

## Saturday 30 January 2021

9:30am - 10:00am	Arrival, Check-in & Welcome
10:00am - 10:15am	<b>A Telescope Like a Time machine - NASA's James Webb Space Telescope</b> <b>Laura Betz</b> NASA
10:15am - 10:30am	<b>Out of this WORLD!</b> <b>Jess McCarthy</b> Mosman High School
10:30am - 10:45am	<b>Student Pathways and Opportunities for a Career in Space</b> <b>Daniel Ricardo</b> Monash University Nova Rover Team
10:45am - 11:15am	<b>Keynote</b> <b>Pam Melroy</b> Retired United States Air Force officer, NASA Astronaut, and Space Shuttle Commander
11:15am - 11:30am	<b>The Benefits of Challenging Students Through the Teaching of Rocket Science</b> <b>Matt Dodds</b> Farrer Memorial Agricultural High School
11:30am - 11:45am	<b>How to Start a Space Company</b> <b>Christopher Capon</b> UNSW Canberra Space / Space Services Australia
11:45am - 12:00pm	<b>BLUE-SKY Learning: The Wolverine and Wolfpack CubeSat Teams (2015-2020)</b> <b>Kevin Simmons</b> BLUECUBE Aerospace / Wolfpack Cubesat Dev. Team
12:00pm - 1:00pm	<b>BREAK</b>
1:00pm - 1:30pm	Arrival, Check-in & Welcome
1:30pm - 1:45pm	<b>Giant Moon and Mars Maps in the Classroom</b> <b>Jim Christensen</b> Aldrin Family Foundation
1:45pm - 2:00pm	<b>Forming a Science Identity in Primary Education</b> <b>Shawna Christenson</b> Aerospace Public Policy Institute
2:00pm - 2:15pm	<b>How to Survive in Space and Treat Disease on Earth</b> <b>Joshua Chou</b> UTS - Senior Lecturer
2:15pm - 2:45pm	<b>Keynote</b> <b>Christyl Johnson</b> NASA Goddard Space Flight Centre
2:45pm - 3:45pm	<b>Panel Discussion</b> <b>Engaging the Best Talent</b>

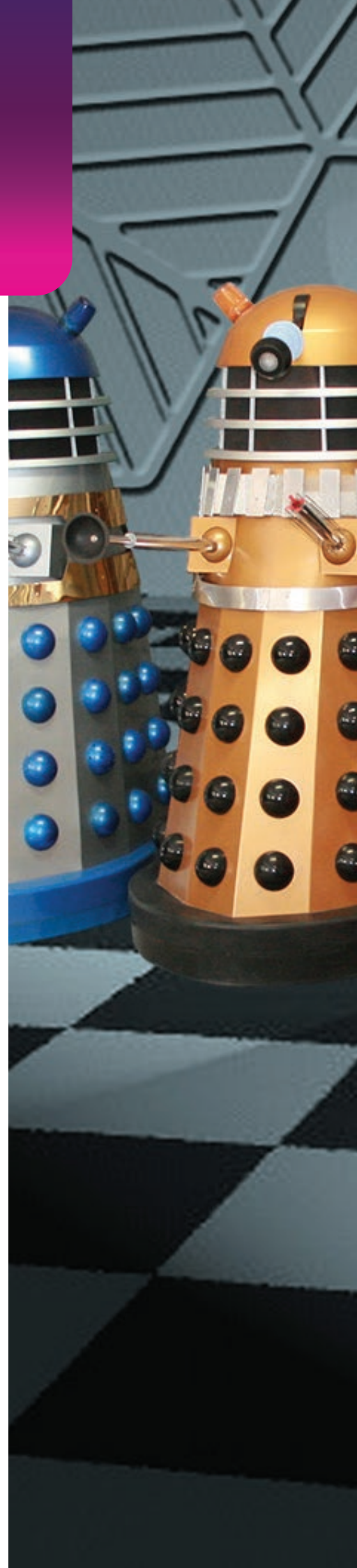




# Day 3

## Sunday 31 January 2021

9:30am - 10:00am	Arrival, Check-in & Welcome
10:00am - 10:15am	<b>STEM Industry School Partnerships (SISP) Program - Space Education Programs</b> <b>Scott Sleep</b> STEM Industry School Partnership Program
10:15am - 10:30am	<b>The Use of Electric and Magnetic Fields to Mitigate Dust in a Lunar Environment</b> <b>Shawna Christenson</b> Aerospace Public Policy Institute
10:30am - 10:45am	<b>We Came in Peace - The Apollo Visitor Complex Project</b> <b>Jim Christensen</b> Aldrin Family Foundation
10:45am - 11:15am	<b>Keynote</b> <b>Phil Bland</b> Space & Planetary Science at Curtin University
11:15am - 11:30am	<b>Asteroid - Introduction, Sampling, Impacts and Prevention</b> <b>Barath Kumar</b> College Of Agricultural Technology, Theniheri
11:30am - 11:45am	<b>Why You Shouldn't Give Up on Your Dream to be an Astronaut</b> <b>Ariel Elbaum</b> Monash University Nova Rover team
11:45am - 12:00pm	<b>Why We Need Plants to Go to Mars</b> <b>John Kiss</b> Univ. North Carolina-Greensboro
12:00pm - 1:00pm	<b>BREAK</b>
1:00pm - 1:30pm	Arrival, Check-in & Welcome
1:30pm - 1:45pm	<b>AAVC Bottle Rockets and Student Engagement</b> <b>Dean Hannah &amp; Brian Barter</b> Excite and Educate
1:45pm - 2:00pm	<b>CapSat-1 and FlipSat-1: Novel Student-Built CubeSat Missions</b> <b>Samer Elhoushy</b> BLUECUBE Aerospace / Wolfpack Cubesat Dev. Team
2:00pm - 2:15pm	<b>Creating a Research Facility for Titan</b> <b>Georgia Alexakis, Stephanie Nguyen, Amelia Chung, Alexandra Ventura</b> Students of Sydney Catholic School
2:15pm - 2:45pm	<b>Keynote</b> <b>Lisa Harvey-Smith</b> Australia's Women in STEM Ambassador
2:45pm - 3:15pm	<b>Keynote</b> <b>Adrian Brown</b> NASA



# Day 4

Monday 1 February 2021

9:30am - 10:00am	Arrival, Check-in & Welcome
10:00am - 10:15am	<b>Beyond Earth, Populating Space</b> <b>Michael Beiharz</b> Knox Grammar School
10:15am - 10:30am	<b>Why Rocket Science is Not Just for Rocket Scientists</b> <b>Cran Middlecoat</b> It's Rocket Science Adventures
10:30am - 10:45am	<b>Home on the Moon with the Aldrin Family Foundation</b> <b>Jim Christensen</b> Aldrin Family Foundation
10:45am - 11:15am	<b>Keynote</b> <b>Corey Tutt</b> Deadly Science
11:15am - 11:30am	<b>Increasing Awareness of NASA's CubeSat Launch Initiative to Enhance STEM Opportunities for All</b> <b>Paul Kiesling</b> BLUECUBE Aerospace / Wolfpack Cubesat Dev. Team
11:30am - 11:45am	<b>Developing and Integrating the First Life Detection Payload on the 2018 Monash Nova Rover</b> <b>Rebecca Muir</b> Monash University Nova Rover team
11:45am - 12:00pm	<b>Space Camp Activities in the Classroom</b> <b>Matt Scott</b> NSW Department of Education
12:00pm - 1:00pm	<b>BREAK</b>
1:00pm - 1:30pm	Arrival, Check-in & Welcome
1:30pm - 1:45pm	<b>Space is For Everyone</b> <b>Paul Hepplewhite</b> NSW Treasury
1:45pm - 2:00pm	<b>Is There Anybody Out There? An Astrobiologist's Search for Life in the Universe</b> <b>Luke Steller</b> UNSW (PhD Student)
2:00pm - 2:15pm	<b>Underwater Habitats as Space Analog Stations</b> <b>Lloyd Godson</b> Hastings Secondary College Westport Campus
2:15pm - 2:45pm	<b>Keynote</b> <b>TBA</b>
2:45pm - 3:45pm	<b>Panel Discussion</b> <b>NSW Space to Grow</b>

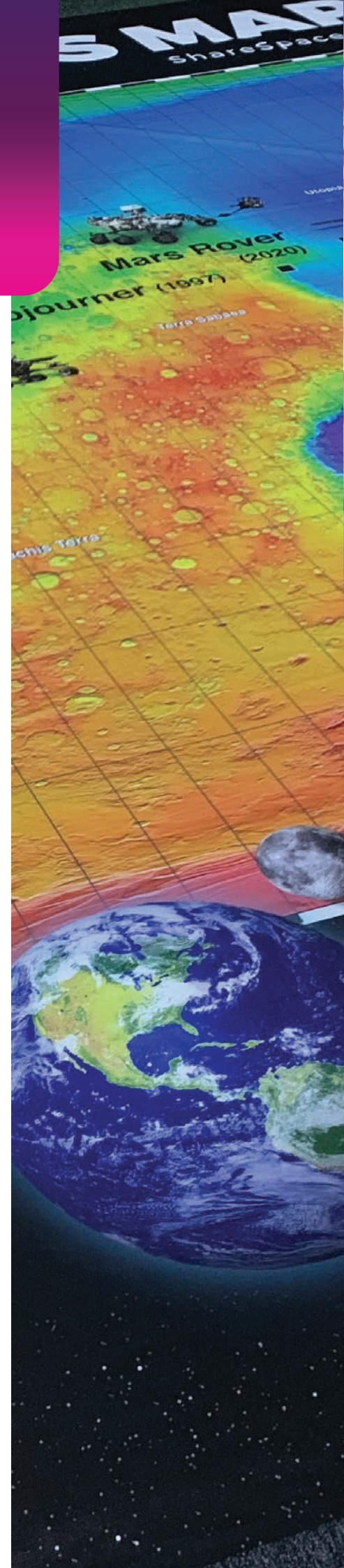




# Day 5

## Tuesday 2 February 2021

9:30am - 10:00am	Arrival, Check-in & Welcome
10:00am - 10:15am	<b>Monash Nova Rover - Students Building Robots</b> <b>Harrison Verrios</b> Monash University Nova Rover team
10:15am - 10:30am	<b>Mission to Mars - One Science Centres Response to the Coronavirus Pandemic</b> <b>Anita Beck</b> Questacon - The National Science And Technology Centre
10:30am - 10:45am	<b>The Nebraska Wolfpack CubeSat Team</b> <b>Joel Murch-Shafer &amp; John Helzer</b> BLUECUBE Aerospace / Wolfpack Cubesat Dev. Team
10:45am - 11:15am	<b>Keynote</b> <b>Andy Aldrin</b> Aldrin Family Foundation
11:15am - 11:30am	<b>The Future of STEM Education in Australia From the Eyes of Pre-Service Teachers</b> <b>Cynthia Nguyen</b> Monash University Nova Rover team
11:30am - 11:45am	<b>How to Run a Bottle Rocket Activity in Your School</b> <b>Ian Preston</b> STEM Industry School Partnership Program
11:45am - 12:00pm	<b>Space Education in South Australia</b> <b>Sarah Baker</b> SA Department of Education
12:00pm - 1:00pm	<b>BREAK</b>
1:00pm - 1:30pm	Arrival, Check-in & Welcome
1:30pm - 1:45pm	<b>Exploring the Next Frontier</b> <b>Peta Kourbelis</b> Hamilton Secondary College
1:45pm - 2:00pm	<b>The ProtoSat - A CubeSat Teaching Program</b> <b>Andrew O'Brien</b> NSW Department of Education
2:00pm - 2:15pm	<b>The Life of a Space STEM Student</b> <b>Shefin Mariya Joju</b> Monash University Nova Rover team
2:15pm - 2:45pm	<b>Keynote</b> <b>Andreas Antoniadis</b> Sabre Astronautics
2:45pm - 3:15pm	<b>Keynote</b> <b>Rosa Doran</b> Nuclio







# MISSION DETAILS

COSPAR-K will be filled with like-minded space and STEM loving people - nothing compares to in-person learning and networking! Inspiration, Engaging ideas and strong takeaways for you to implement in your classroom are promised.

Our daleks will be out on patrol as attendance is strictly capped at 150 people each day so book your ticket today!

**Take-Off Dates**

Friday 29 January -  
Tuesday 2 February 2021

**Coordinates**

Pymont Theatre,  
ICC Sydney

**Daily Program Time:**

9:30am - 3:30pm

**Cost:**

100% FREE

**BOOK YOUR TICKETS TODAY**

[stem@cospar2021.org](mailto:stem@cospar2021.org)  
[cospar2021.org/stem](https://cospar2021.org/stem)



#cospark2021

