

**Asian
Physics
Olympiad**

Adelaide, Australia | 5–13 May 2019

GRAVITAS

APhO 2019 NEWSLETTER
ADELAIDE, AUSTRALIA
VOL. 2 7 MAY 2019

Gravitas was inspired by the Latin word for 'Gravity', it being the fundamental force of nature that holds our universe together - much like the passion for physics that binds people of diverse backgrounds and aspirations at a momentous occasion like APhO.

CEREMONIAL WELCOME



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INSIDE

ENTHRALLING INDIGENOUS PERFORMANCE

Audience taken on a journey
of rich cultural history

EXAM PREPARATION

What went into putting the
students to the test

SCHOOL VISITS

Peek into the life of an
Australian student



OPENING CEREMONY HIGHLIGHTS

Some 250 delegates witnessed yesterday the official opening of the Asian Physics Olympiad here in Adelaide. The ceremonious event, which kicked off on a high note, certainly left the room energised and ready for the journey that awaits this week.

First up was a beautiful Welcome to Country by Jack Buckskin, a Kaurana and Narrunga man. This symbolic ceremony, performed by an Indigenous Australian Elder to welcome visitors to their traditional land, takes many forms. Jack used the traditional Didgeridoo in hopes of continuing the tradition of playing the world's oldest instrument in the 21st century.

Attendees also received some wise and encouraging words by esteemed speakers, among them were Australia's former Chief Scientist Professor Ian Chubb AC, South Australia Chief Scientist Professor Caroline McMillen and Professor Fred Watson, Australia's Astronomer-at-Large.

In welcoming the students to Adelaide, these science powerhouses also expressed their pride in standing before some of the best talent who are poised to be the future game changers.

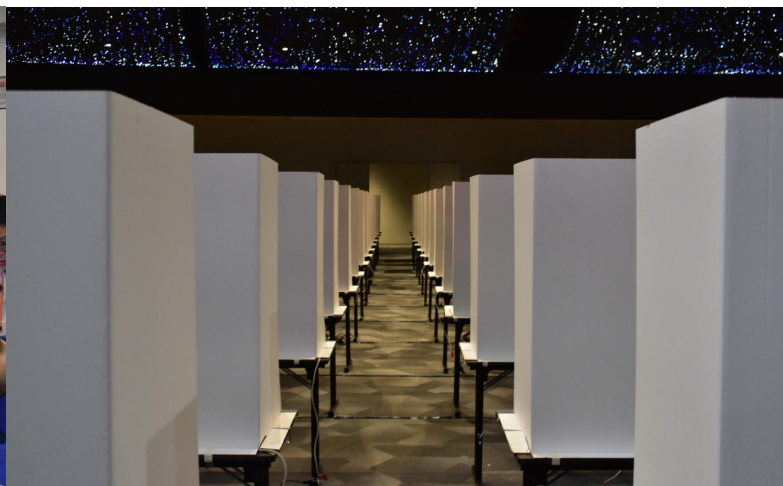
The entire affair would not have been the same if not for the energetic dance performance by the Cheryl Bradly Dance Troupe. Grooving to the tunes of Bruno Mars, the troupe truly ended with a bang, uplifting the crowd.



ALL HANDS ON DECK

Preparing for Asia's toughest physics competition requires collective effort from various heavyweights.

Yesterday, Team Leaders, Observers and Volunteers were involved in the tedious task of going over the theoretical physics examination papers students spent months preparing to ace in this competition. In this process, done within each country group, participants start by reviewing the exam questions followed by open discussions and votes on whether the questions are to be kept, changed or removed. Once this has been decided and finalised, translation of the papers takes place with this whole process often being an all-nighter. At the Adelaide Convention Centre, the exam hall setup is now complete. We wish all students the best of luck for the first exam this morning.



AUSSIE SCHOOL LIFE

Yesterday afternoon, delegates spent their afternoon visiting 10 schools in Adelaide such as the Adelaide High School, St Peter's College and Unley High School. The Australian and Israeli teams had an exciting trip to Pembroke High School, where our Physics Olympians got a taste of the Australian school culture as some hand-balled a footy for the first time, had their first unforgettable Vegemite biscuit, Lamingtons and TimTam bites, and some simply enjoyed the beautiful campus tour.

Along with his students, the school's Head of Science Graham Duffy extended a warm welcome to our delegates and kicked off the school visit by introducing the popular Australian Rules Football, fondly known as footy. After the Aussie sporting experience, APhO students got the chance to see the physics lab and joined Pembroke students to work on some hands-on activities to measure voltage and current for a resistor and apply the Ohm's Law to work out the resistance. This was followed by a campus tour filled with good times.



ROSEMARY ZIELINSKI
AUSTRALIA

"It's very interesting to see what Australian schools look like in other states, and more importantly, it's very enjoyable showing other people your country, like what your school is like, even though it's not my school. Half of the fun is meeting other teams. We've been playing lots of games with the Israeli team, and just exchanging about what life is like being a school student."



ERAN MANN
ISRAEL

"I love swimming, tennis, jogging and frisbee. I've played American football once or twice, but I have never kicked a football in this way. So, it's definitely a new experience and it's already a lot of fun. I wish we would get more chance to play it during our time here."

GRAHAM DUFFY
HEAD OF SCIENCE

"Our school is very internationally-focused that we have a boarding house with students from all around the world. Our community is also very international that we have teachers coming from different parts of the world.

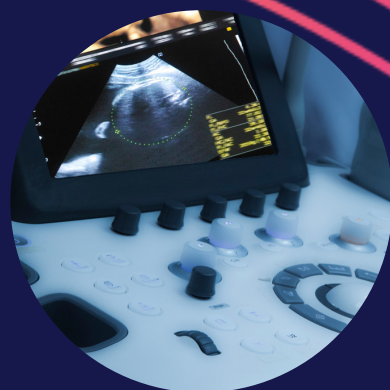
"We teach South Australian Certificate of Education (SACE) and International Baccalaureate (IB). Through the IB, we are connected to schools all around the world. We do believe that it's important to keep these connections open. That's part of the reason why we want to be part of APhO 2019."



AUSTRALIA'S PHYSICS TRAILBLAZERS

Before the ultrasound became a routine procedure in prenatal check-ups, pregnant mothers had been using X-rays to obtain health information of their unborn babies. Exposure to the radiation that could harm a baby's development was of great concern.

In 1961, an Australian ultrasound research group led by David Robinson and George Kossoff made an extraordinary breakthrough in the area of diagnostic ultrasound and built the world's first commercially practical ultrasound scanner. The radiation-free ultrasound scan utilises high-frequency sound waves to capture live images of the baby. Nowadays, the diagnostic technique not only makes birth much safer for mothers and babies but plays a significant role in examining other internal body structures.



AUSSIE WORD OF THE DAY

'RECKON'

To mean 'think' or 'assume, here's another Aussie slang word to add to that dictionary.

E.g. What do ya reckon? / I reckon the weather tomorrow will be good enough to go to the beach!

WEATHER



Rainfall

High 18° Low 11°

JOIN THE CONVERSATION

    @apho2019

 apho2019.asi.edu.au

ACKNOWLEDGEMENT OF COUNTRY

Kaurna miyurna, Kaurna yarta, ngadlu tampinhi

The Asian Physics Olympiad Committee acknowledges that we are meeting on the traditional country of the Kaurna people of the Adelaide Plains. We recognise and respect their cultural heritage, beliefs and relationship with the land. We acknowledge that they are of continuing importance to the Kaurna people living today.

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HAPPY BIRTHDAY!

LE QUANG HUY
Student, Vietnam

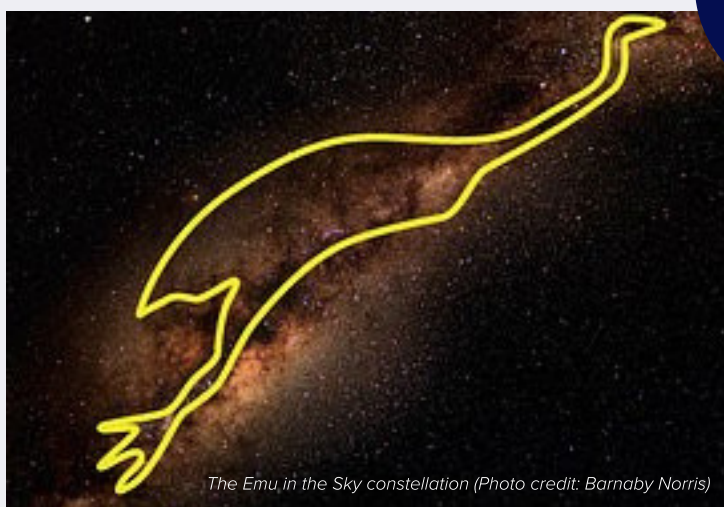
LE VIET HOANG
Student, Vietnam

GUO XUBO
Observer, China

ADELAIDE INSIDER

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INDIGENOUS ASTRONOMY



The Emu in the Sky constellation (Photo credit: Barnaby Norris)

TODAY'S
SNEAK
PEEK

Astronomy is not a new field. For tens of thousands of years, humans have been looking to the sky for meaning.

To the ancient Egyptians, the stars were gods and goddesses, whereas the ancient Chinese tended to use astronomy for practical purposes, such as timekeeping.

The First Nations people of Australia have been blending science with storytelling for over 65,000 years; making them the oldest astronomers in the world.

Unlike Greek celestial practice, which focuses almost wholly on stars, Indigenous astronomy focuses on the dark patches between the stars. An example of this is the story of the Emu in the Sky constellation.

You can spot the emu by looking south to the Southern Cross; the dark clouds between the stars is the head, and the neck, body and legs are formed from gas and clouds stretching across the Milky Way.

According to Indigenous legend, emus were creator spirits that used to look over the land.

The position of the emu in the sky indicates when to collect emu eggs, and it is well known amongst Indigenous groups across Australia.

The Kaurna people (the traditional custodians of the land that the University of Adelaide is located on) saw the same dark patches as a large river where a Yura (monster) lives in the dark spots.

This knowledge is a living part of Indigenous cultures and continues to evolve.