



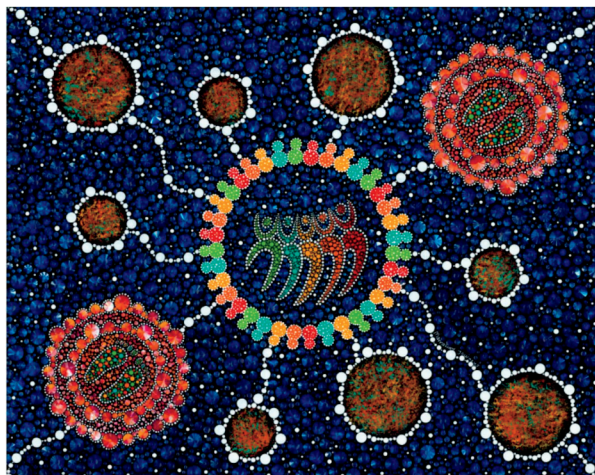
Junior
Science
Olympiad

2024

Australian Junior Science Olympiad Team



AUSTRALIAN
SCIENCE
INNOVATIONS



Reach for the Stars (and beyond)

Sarah Richards created this special artwork for Australian Science Innovations in February 2023. Sarah is a Ngiyampaa woman whose lineage and experiences shape her unique artistic narrative. You can learn more about Sarah at Marraway Journeys: www.mjourneys.com.au

“I hope that the students who participate in the Australian Science Innovations programs can draw strength from this piece and stretch themselves to reach their highest potential.”

Acknowledgement of country

We wish to acknowledge the Ngunnawal people as traditional custodians of the land we are meeting on and recognise any other people or families with connection to the lands of the ACT and region. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region. We would also like to acknowledge and welcome other Aboriginal and Torres Strait Islander people who may be attending today's event.



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ORDER OF PROCEEDINGS

Welcome to Country

Uncle Warren Daley, Ngunnawal Elder

Master of Ceremonies

Vanessa Kates, Executive Director
Australian Science Innovations

Welcome Address

Anna Davis, Chair of the Board
Australian Science Innovations

Guest Speaker

Emeritus Professor, Ian Chubb, AC, Patron
Australian Science Innovations

Program Team

Dr Kathryn White, BSc (Hons) PhD (USyd)
Co-Program Director, Junior Science Olympiad

Team Announcement

Thank You & Close

Light Refreshments



CONGRATULATIONS TO THE 2024 AUSTRALIAN JUNIOR SCIENCE OLYMPIAD TEAM

The International Junior Science Olympiad is a globally recognised competition, held annually, that features the best and the brightest young science students from around the world.

Participating in the Junior Science Olympiad can be an incredibly rewarding experience for students. Not only does it provide them with an opportunity to showcase their knowledge and skills in science, but it also exposes them to a diverse range of perspectives and approaches to problem-solving.

Furthermore, being a part of the Australian Junior Science Olympiad team can help students to develop important life skills such as teamwork, communication, and time management. It can also inspire them to pursue careers in science and technology, and to become the next generation of innovators and problem-solvers.

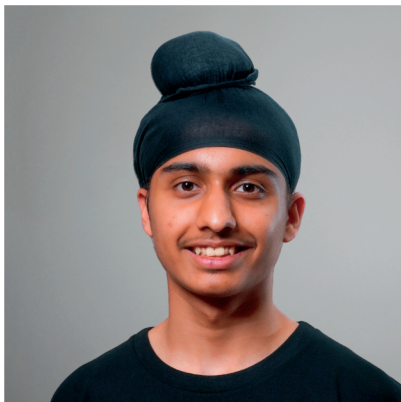
Overall, the Junior Science Olympiad is an excellent platform for young people who are passionate about science to challenge themselves, learn new things, and connect with like-minded individuals from around the world.

I would like to congratulate the students who have been selected to represent Australia in Romania in December, and acknowledge the support of their families, principals and teachers in inspiring these remarkable young people to step outside their comfort zone and reach for the stars.

**Anna Davis, Chair of the Board
Australian Science Innovations**

JASKEERAT ARORA

Baulkham Hills High School, NSW



“My teachers and parents have always been supportive of me throughout my journey, but I choose to explore science because of my own passion for it,” Jaskeerat shared.

“I am inspired by scientists who contributed to our understanding of fundamental physics, especially particle physics and quantum mechanics, such as Albert Einstein.”

Jaskeerat’s favourite discipline of science is physics, “because I love understanding how the world works at a fundamental level, and I appreciate the mathematical beauty of physics.”

Outside his science studies, Jaskeerat has a passion for mathematics. He has participated in Maths Olympiads in the past and has an interest in programming. “I also enjoy reading, playing chess, and table tennis.”

“My favourite part of Spring School was the practical lessons, particularly physics and chemistry, where the concepts we learnt in class were applied to the real world,” Jaskeerat described his experience. “It was also a fun opportunity to interact with friends!”

At the International Junior Science Olympiad in Romania, he will enjoy spending more time with friends. “I’m looking forward to a fun experience in a new country and learning a lot more science.”



“I would emphasise the importance of teamwork in the lab. Any experiment or activity conducted in a team absolutely requires all the members to work together and cooperate.”

JOSIAH LEVCHENKO

Gippsland Grammar, VIC



Chemistry is the field of science that Josiah prefers, “because it is fascinating to me how we can explain what happens at the human scale by using what we know about what happens at the atomic scale.”

“I think it's amazing that we have the ability to see things at the atomic scale, and how it is possible to observe things so far out in space as well.”

“The teachers at my school definitely helped me get into science, giving me so many opportunities to develop my knowledge and skills, and helping me with the Junior Science Olympiad program,” Josiah shared.

Besides science and maths studies, Josiah enjoys playing sports, ‘most of all, tennis’. He likes to read or listen to music to relax. “I also do speedcubing as a hobby.”

“The thing that I enjoyed most about Spring School was being able to meet with other kids who share the same interest in science, especially those who I may have known for a while but never met with in person.”

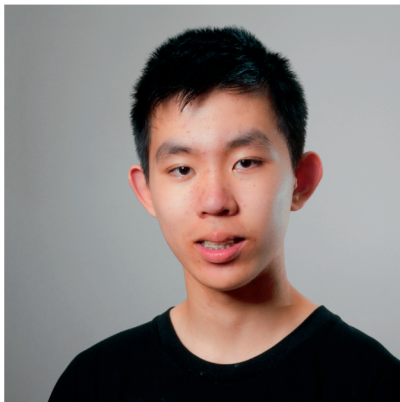
At the International Junior Science Olympiad in Romania, Josiah is looking forward to meeting scientists from all around the world, and the experience of competing with people from many different countries.

“A highlight from the lab was performing titrations. It was very fun to use all the different types of glassware and being so precise with your measurements - with just one drop changing the colour of the entire solution!”



ALEX MA

Sydney Grammar School, NSW



“My love of science has always been encouraged by my parents. My science teachers helped me develop a passion for science, often teaching us content beyond the scope of the curriculum,” Alex shared.

“What I enjoyed at Spring School was meeting incredible people and building lasting friendships. I felt the tutors made a huge impact by helping me gain a deep understanding of advanced science.”

“My favourite discipline of science is physics because it explains how the natural world fundamentally works and it forms the foundation for the other sciences. Additionally, physics is based upon problem-solving skills, making it very enjoyable for me.”

Outside of science, Alex is passionate about mathematics. He also enjoys reading, playing board games, participating in cadets, and debating.

Alex admires Edward Jenner's discovery of vaccination and Alexander Fleming's discovery of penicillin. “They inspire me because of their profound impact on people's lives by helping to prevent deadly diseases.”

Alex says of his plans for the future, “I would like to go into scientific research and aspire to make meaningful contributions to my field by discovering something new or designing solutions to real-world problems.”



“A highlight in the lab was the titration and aiming for the most accurate result possible. During a practical, I find that the most crucial skill is managing the limited time effectively and multitasking whenever possible.”

CHRYSOLITE SALLA

Presbyterian Ladies' College Sydney, NSW



"I love all disciplines of science because of their interconnected nature, but my favourite is chemistry," Chrysty, known to most as Chrysty, shared.

"I love how it incorporates both theory as well as a lot of calculations. It can explain phenomena all around us, even those that are relevant to other disciplines of science."

Chrysty is grateful to her parents, who "introduced me to science really early on and have always encouraged my curiosity about the world around me, even when I asked far too many questions! I've just loved it ever since."

Spring School gave Chrysty the opportunity to learn more across all the disciplines of science, "but what I enjoyed even more were the practicals! I was able to do experiments that I would not have done at school, or at least not in the near future. I loved meeting people from across Australia who love science, along with all the laughter and learning."

In Romania, Chrysty is excited to "meet students from all across the world who love science just like I do and learn with them."

Chrysty enjoys reading, writing poems for the school magazine, singing in the choir, and public speaking.

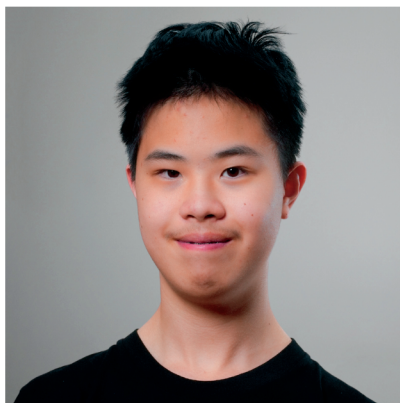
In the future, she would like to "enter medicine, pharmaceutical science, or any other career that allows me to incorporate my love of science into directly helping people."



"When doing practicals in the lab, take your time with things, allowing yourself to be calm and focused on the work you're going to do."

ERIC XIE

Kelmscott Senior High School, WA



“My school held the Big Science Competition, which paved the way for my future in science. After being selected for the Junior Science Olympiad Training Squad, I was able to learn more and develop a strong interest in physics, chemistry, and biology,” Eric explained.

“My high school teachers encouraged me to continue advancing in science.”

“Chemistry is my favourite science because it can be applied in our daily lives and has a wide range of applications, from industry to our normal household activities, such as producing steel and preserving food.”

Eric is inspired by Dmitri Mendeleev, one of his favourite scientists. “He developed the periodic table, which is now a fundamental and iconic part of chemistry. He inspires me to make new discoveries and reminds us that patience is incredibly important in scientific fields.”

Eric enjoys playing classical music on the piano and reading history books. He also practices Tae Kwon Do regularly to improve his resilience and discipline.

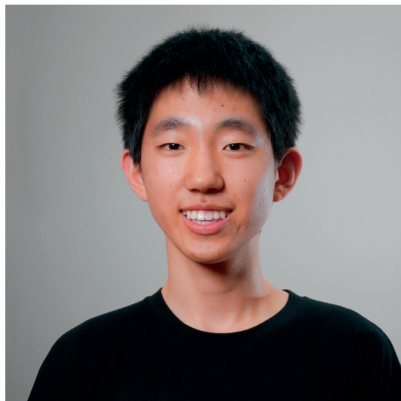
“I am interested in carbon nanomaterials due to their amazing properties, such as high strength and being extremely lightweight. They have huge potential in areas like space exploration. I wish to pursue a career in nanotechnology, but I’m also considering other fields, such as chemical engineering.”

“Patience is very important, especially for practical exams. Although the time limit causes a lot of stress, it is necessary to remain calm and read the instructions carefully.”



OWEN ZHAI

Brisbane State High School, QLD



“My parents were the ones who recognised my potential talent in science and encouraged me to sign up for competitions. I took the Junior Science Olympiad exam in Year 8 and qualified for the JSO Academy.”

“Whilst I didn't qualify for the IJSO team last year, I saw this as an opportunity to improve my problem-solving and scientific thinking skills.”

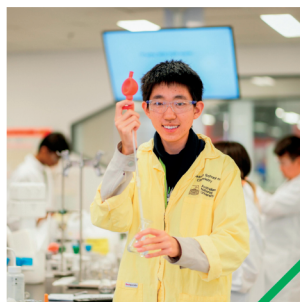
“Physics gives me a broader and more accurate understanding of the world we live in today,” Owen says of his favourite scientific discipline. “I love the theory of relativity, as it shows how collaboration can really make a scientific discovery better.”

Owen loves baking bread, “because it allows me to enjoy the art of turning simple ingredients into something more. I love baking by feel because it shows how we can tell whether our bread will be too flat or too dry just by the texture of the dough.”

At Spring School, Owen enjoyed living and experiencing a different environment to home, as well as learning more about science and the practical work. He also embraced meeting new people, “perhaps friends that will last a lifetime!”

In Romania, Owen is looking forward to doing the team practical exam with his friends, plus “seeing cool Romanian castles and hopefully seeing snow for the first time!”

“My tip in the lab is to manage your time well. If you're under time pressure, you should spend a few minutes planning out how long to spend on each step to maximise precision while not sacrificing too much time.”



DR KATHRYN WHITE

Co-Program Director



Kathryn has been a dedicated advocate and supporter of the Junior Science Olympiad program since 2016.

In 1993, Kathryn travelled to Perugia, Italy to represent Australia at the International Chemistry Olympiad, where she earned a bronze medal. This experience was pivotal in shaping her career path and expanding her network within the scientific community.

Kathryn holds a Bachelor of Science (Honours) and a PhD in Physical Chemistry from the University of Sydney. Following her doctoral studies, Kathryn worked as a post-doctoral researcher in the School of Physics at the University of Edinburgh. While her degree is in chemistry, Kathryn has a deep appreciation for all the branches of science.

Transitioning from research to education with a Diploma of Education, Kathryn is a highly accomplished (AITSL certified) teacher of STEM subjects in secondary education. She currently teaches science in Canberra.

Kathryn was an integral part of the Australian National University Extension (Chemistry) program from 2011-2020. She also contributed to the Australian Chemistry Olympiad as a program member for several years, and served as Deputy Program Director of the *Curious Minds - girls in STEM* program.



DR TAMMY HUMPHREY

Co-Program Director



Tammy is a passionate scientist and educator who has been supporting Junior Science Olympiad students since 2020.

She holds a Bachelor of Advanced Science with First Class Honours and a PhD in Solid State Physics, focusing on the thermodynamics of low dimensional thermoelectrics, from the University of New South Wales.

Tammy's post-doctoral research includes positions at the UNSW, the University of Wollongong and the University of California, Santa Cruz. In 2006, she was appointed a Marie Curie Incoming International fellow at the University of Geneva, further enriching her expertise.

After returning to Australia, Tammy completed a Diploma of Education in Physics at Macquarie University. She then taught HSC Physics for a number of years at James Ruse Agricultural High School in Sydney.

Currently, Tammy serves as a Sessional Lecturer at the Australian Catholic University and teaches small group classes for physics at both the HSC and Olympiad levels.



SUREN MENDIS

Deputy Program Director



Suren is an enthusiastic science educator based in Canberra, who has been dedicated to supporting students in the Junior Science Olympiad program since 2023.

He is grateful to be part of an exceptional community of educators and professionals, all committed to enriching the educational experience for students.

Suren holds a Bachelor of Medical Science and a Graduate Diploma in Secondary Education from the University of Canberra. He also earned a master's degree in Science Communication from the Australian National University.

Currently, Suren is pursuing a PhD at the Australian Catholic University, focusing on "Teacher Perspectives of Digital Literacy and Online Learning".

In his teaching career, Suren works at the Burgmann Anglican School, where he previously served as Head of Science for two years. He is the chemistry instructor for an ANU Extension Course and serves as the Project Coordinator for meriSTEM. His professional background includes roles as a Biology and Research Skills Lecturer at ANU College, as well as a chemistry tutor, lab demonstrator and peer mentor.



THANK YOU TO OUR SUPPORTERS



Australian
National
University

Stile

Thank you to ANU for providing teaching space, labs and lab staff to support the Junior Science Olympiad program.

Thank you to Stile for providing the online teaching platform to support the Junior Science Olympiad program.

SUPPORT OUR PROGRAMS

Australian Science Innovations proudly delivers the Junior Science Olympiad program. We are a not-for-profit organisation whose mission is to inspire, challenge and raise the aspirations of students in science through the delivery of innovative science extension programs.

Since 1991, we have been working in partnership with teachers, schools and organisations who understand the importance of investing in science education. We have developed a range of programs and initiatives aimed at identifying and nurturing talented students in science, from across Australia.

Our Junior Training Programs aim to reach more students from underrepresented areas, fostering diversity and inclusivity both within our programs and across broader Australian science fields. Achieving this goal is challenging, and we need your help to ensure these students have the opportunities to thrive.

We are currently seeking sponsorship from individuals and organisations interested in helping young students unlock their potential and succeed in science.



Scan this QR code to visit the ASI website and find out how you can help...

GOOD LUCK TO THE 2024 AUSTRALIAN JUNIOR SCIENCE OLYMPIAD TEAM

Thank you for attending the ceremony. We hope the team have a wonderful experience whilst in Romania from 2 to 11 December.


To stay up to date with the team, please follow us on social media and sign up to the ASI newsletter on our website.



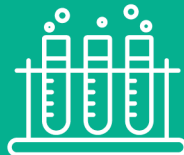
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