



*Everyone deserves the chance to share
the journey of quantum discovery*

Boosting STEM enthusiasm

**Empowering girls to explore
STEM pathways**

**Modern quantum science to all
schools across Australia**



Einstein-First (QUISA)



pawsey

The Project

Quantum Girls is a national project designed to inspire students, especially girls, to follow STEM pathways through early exposure to quantum science and quantum computing.

- Fun, activity-based teacher training program for primary and middle school teachers.
- Teachers without science backgrounds discover the concepts of modern quantum science, giving them skills and confidence to effectively teach modern concepts using hands-on activities.
- Student engagement with activities transforms their attitudes and builds confidence in STEM subjects.
- By engaging students, especially in the critical years 5 – 10, we cultivate the mindset needed to embrace the quantum science that powers the world, and is needed for a sustainable future.



Spinning tops: A step towards understanding quantum spin

Opening minds, boosting female participation

Reverse the decline in teenage students' interest in STEM, especially girls.

- Open minds to exciting career opportunities and foster entrepreneurship.
- Reverse the gender gap in STEM fields.

Embrace quantum thinking.

- Quantum science of climate and renewable energy.
- Quantum sensors and medical instruments.
- Quantum communication and cyber security.
- The quantum computing revolution.

Micro-credential courses and workshops give teachers the necessary knowledge and training to effectively teach this rapidly evolving field.



Einstein's Nobel prize for quantum science:
photon energy lifting a bucket

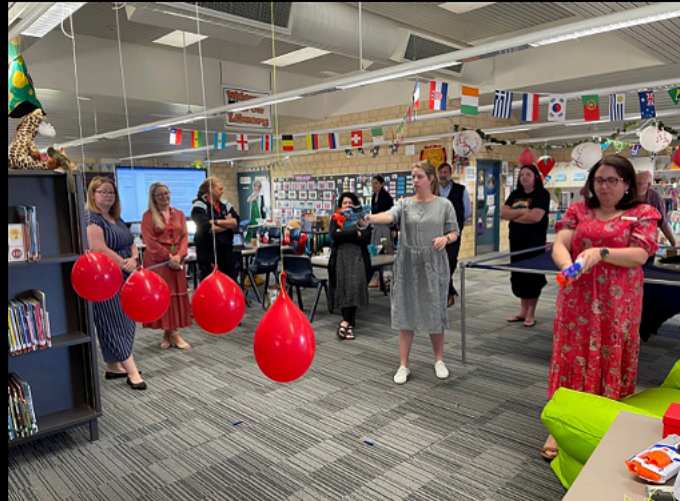
What we offer?

Teacher training

You don't need an advanced science degree!

Using activities, we give teachers skills and knowledge to teach quantum concepts in their classrooms.

- Teaching quantum science and quantum computing is easily learnt through games and activities.
- Immersive learning experiences will give you the confidence to guide your students, foster their curiosity and excite them about the frontiers of knowledge.



Primary school teachers discovering photon momentum with toy photons and balloons

After school STEM clubs

We provide content for primary and high school STEM clubs.

- Inspiring students with guest speaker role models.
- Explore and engage with hands-on activities and games.
- Become part of a community of science and technology enthusiasts who are curious about the world around them.

Quantum Hackathons

One-day quantum hackathons are designed to give years 7 - 12 students deep creative experiences in which quantum thinking is paramount. Teams choose from diverse areas including

- Science fiction, music and drama.
- Quantum science and devices.
- Quantum games.
- Quantum computing and coding challenges.

Our hackathons are designed to unleash students imaginations and creativity, exciting them with interesting and mind-bending challenges, that promote teamwork and collaboration.

Access to real quantum computers

- Quantum Girls offers remote access to the first educational quantum computers hosted in Australia, SpinQ Gemini and SpinQ Triangulum.
- Students have a unique chance to gain experience in coding using real quantum computers.



Our mission

Our mission is simple yet powerful – to inspire, engage, and empower students to pursue vibrant careers in STEM.

- Quantum Girls aims to boost quantum science and quantum computing education across Australia.
- Quantum Girls provides students, especially girls and underrepresented students, with opportunities to explore quantum science and delve into the awe-inspiring world of quantum computing.

Invitation

We invite primary and high school teachers to register as Quantum Girls leaders in their schools.

We invite students to register so as to receive updates and newsletters.

We invite parents and members of the public to register as local helpers.

Together, we help you shatter barriers, unlock the secrets of the quantum realm, and pave the way for a future where everyone soars to new heights in STEM.

Join Quantum Girls today, and let's embark on an extraordinary adventure.

Contact us

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