Mathematics and Physics

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

The School of Mathematics and Physics (SMP) is committed to excellence in learning, discovery and engagement within the disciplines of mathematics, statistics and physics. We bring together world-class researchers and teachers, innovative industry experts, and the brightest students to deliver impact across Australia and abroad.

Research Strengths

- astrophysics
- biophotonics and laser science
- conservation
- logistics and planning
- machine learning
- mathematical biology
- mathematical material science
- nanotechnology
- pure mathematics
- quantum physics
- solar cells
- statistics and data science
- supporting primary industries
- telecommunications

Research Impacts

We have contributed to significant scientific insight as diverse as:

- mathematical modelling for a sustainable fishing industry
- quantum sensors improving navigation and communication in unmanned vehicles
- nanofabrication and nanophotonics techniques building ultraprecise ultrasound sensors for medical devices
- low energy technologies to provide efficiencies for ICT applications
- engineering usable quantum silicon chips
- flux capacitor to break time-reversal symmetry.

Ranked 'well above world standard' in seven key maths and physics disciplines

Excellence in research (ERA) for Australia 2018 assessment

4 Australian Research Council Centres of Excellence nodes

5 **Australian Academy of Science Fellows**

29 **Australian Research Council Fellows including Laureates, DECRAS and Future Fellows**

200+ peer-reviewed publications per year

Partnerships

Our research and teaching successes are underpinned by our long-standing links with industry and government.

We work closely with our partners on a wide range of collaborations, including research projects, commercialisation ventures, and student industry placements and internships.

Research Centres

We host, or are associated with, a range of Centres that enable intensive and colaborative investigation into specialised areas.

- Centre for Applications in Natural Resource Mathematics
- Centre for Mathematical Physics
- Centre for Organic Photonics and Electronics
- Centre for Statistics

ARC Centres of Excellence:

- ARC Centre of Excellence for Engineered Quantum Systems
- ARC Centre of Excellence for Environmental Decisions
- ARC Centre of Excellence for Future Low-Energy Electronics Technologies
- ARC Centre of Excellence for Mathematical and Statistical Frontiers
- ARC Centre of Excellence for Quantum Computation and Communication Technology

Education and Training

Our School's research and teaching excellence in the fields of mathematics, statistics and physics is recognised worldwide. Our experts strive to answer complex questions and meet global challenges by delivering insight and innovation in areas as diverse as finance, navigation, conservation, mining and transport.

Our graduates are quantitative scientists and critical thinkers, equipped to provide expertise across a range of disciplines, including engineering, health sciences, finance, sustainable energy, primary industries and social sciences.

We also offer a range of courses for continuing professional development targeted at software expertise and advanced statistics, mathematics and physics training.

Higher Degree by Research

Our higher degree by research programs offer outstanding research and training opportunities in the fields of mathematics, statistics and physics.

Engagement and Inclusion

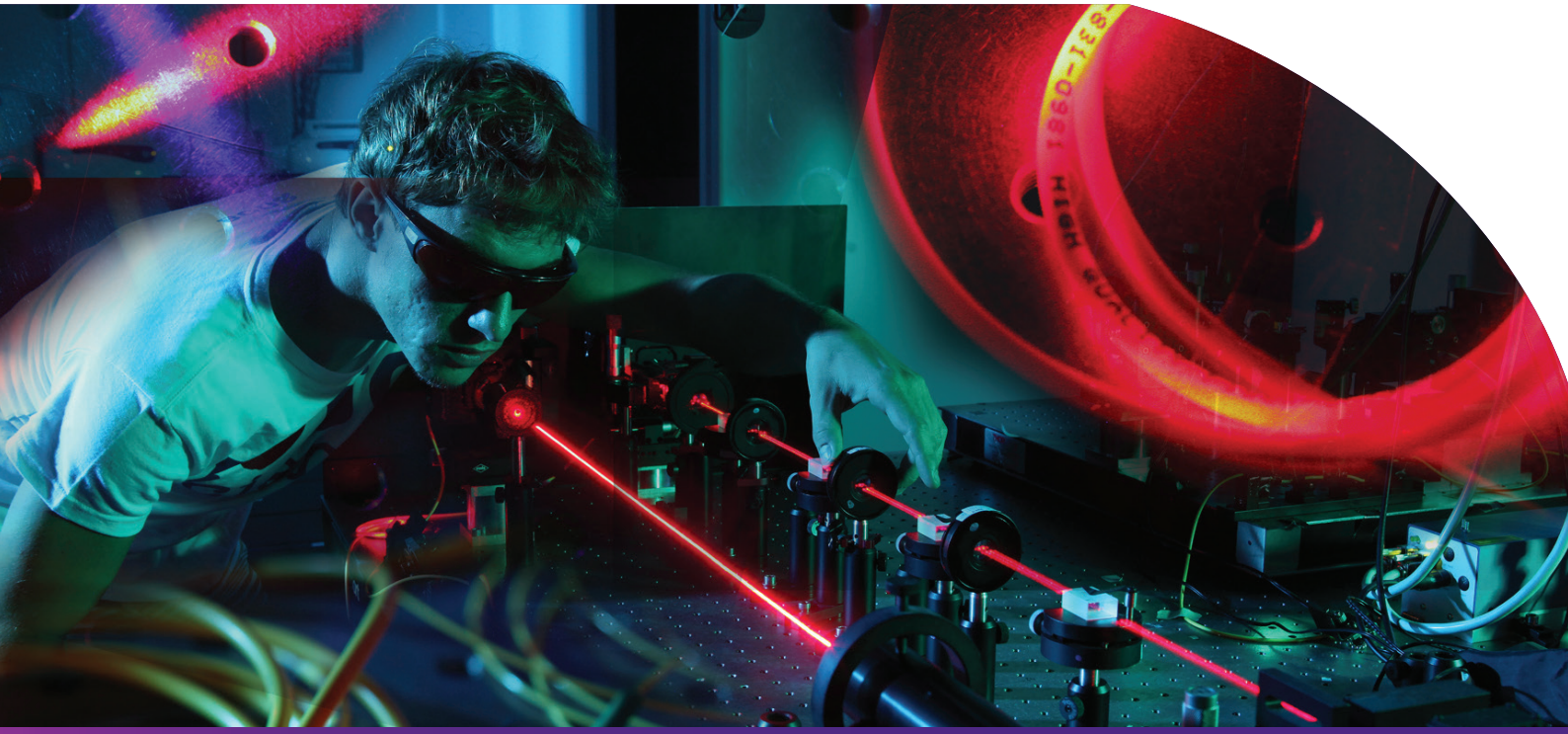
We're recognised for our efforts to promote inclusion within our School and are committed to providing an equitable workplace for all.

Our Equity and Diversity Committee helps ensure we continue to offer appropriate resources and support to achieve these goals.

Contact us

Email enquiries@smp.uq.edu.au

or call +61 7 3365 3405



School of Mathematics and Physics

The University of Queensland

smp.uq.edu.au

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