

The Australian Mathematical Sciences Institute (AMSI)

is the peak body for the mathematical sciences in Australia. AMSI represents the key fields of mathematics, statistics and data science, together with other cognate disciplines of a highly quantitative nature. AMSI has a broad membership base including universities, professional societies, government agencies and corporate entities. It plays a unique role in the mathematical sciences ecosystem, by providing a national voice and scale for

its membership. This role includes expert advocacy to government and the community, provision of authoritative information and policy recommendations, facilitation and coordination of national co-operation, provision of platforms for academic research, the research training of undergraduate and graduate students; and an integrated strategic approach to address the training pipeline of mathematical scientists, from schools to higher education and the broader workforce.

WHY THE MATHEMATICAL SCIENCES MATTER

The mathematical sciences play a vital role in the advancement of human society, from both a cultural perspective and ability to drive technological advancements for sustainable development. Applications of mathematics are critical to innovation in all disciplines and sectors, with the benefits flowing to all Australians through increasing employability, job creation, economic mobility, productivity, and global competitiveness. The motivations described below have distinct but related purposes and illustrate the broad scope and importance of the mathematical sciences. They are:



Mathematics for sustainable development:

Australia's economic development and environmental and social wellbeing rely heavily on the mathematical sciences. Business, government, and industry all depend on increasing numbers of graduates with high levels of mathematical competencies to focus on the critical priorities of a data and analysis driven economy, technological advancements and innovations, and the progression to a zero-carbon future.



Mathematics for personal wellbeing:

Mathematical understanding provides important skills for us to function effectively in our daily lives. Logic and numeracy skills are necessary to make prudent decisions across all facets of life—financial, health, safety, career—and to understand the world and society around us.



The intrinsic value of mathematics:

Pursuing new mathematical knowledge and appreciating the cultural impact of mathematics has been an important endeavor across the history of humanity. Learning and taking pleasure in mathematics, its theories and abstractions, adds to the richness of society and our lives. Laying the foundation for a better understanding of the world through curiosity-driven pure mathematics research ultimately leads to and facilitates applied mathematics research and the applications in allied disciplines, that lead to sustainable development.

VISION

Australia has a vibrant mathematical culture that is valued as a national asset. That the mathematical sciences enrich Australian society and are recognised as a fundamental driver of its economy.

That all Australians have the opportunity to develop their mathematics skills and knowledge, to enhance their careers, acquire essential life skills and to enrich their lives.

MISSION

AMSI will champion the mathematical sciences in Australia, by:

Sustained advocacy of the mathematical sciences through the provision of authoritative information and influence of national policy.

Enhancing mathematical sciences education and research to support the development of world-class mathematical scientists.

Influencing the mathematical sciences student pipeline to increase the number and diversity of students studying mathematics at school and university.

Facilitating employment linkages for graduates in the mathematical sciences.

Engaging stakeholders in the mathematical sciences ecosystem to strengthen the impact of the Mission, enhance reputation and global profile.

STRATEGIC GOALS 2024–2027

1. To increase AMSI's impact as an important peak body, by raising the profile of the national discourse on mathematical sciences.
2. To facilitate the provision of world class research training and professional development, for students and early career mathematical scientists.
3. To increase participation rates in the mathematical sciences at secondary school and university to help meet growing workforce demand for mathematical scientists.
4. To influence the improvement in diversity of mathematical sciences students and workforce cohorts, to achieve fair and equitable access and outcomes for under-represented groups.
5. To support career development and industry employability of student and early career mathematical scientists.
6. To increase stakeholder engagement and diversity of funding sources to strengthen reputational position, influence, convening power, partnerships, and collaboration.