Arresting the Decline in Secondary School Mathematics Enrolments

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There are substantial and ongoing concerns in the international secondary and tertiary education sectors about the number of students choosing Advanced Mathematics in secondary school. Declining enrolments in the last two years of secondary school Intermediate and Advanced Mathematics is seen as a major concern for the future of STEM education:

> Falling participation in higher maths and physics, especially, is a worry to me…We need to understand why this is happening, and work to turn it around so that Australia remains a science and research powerhouse (Office of the Chief Scientist, 2023).
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> Student uptake of fundamental subjects in secondary school such as higher mathematics, intermediate mathematics and science subjects has declined nationally over recent decades (Office of the Chief Scientist, 2020).
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> This (Advanced Maths numbers) is the lowest level recorded in more than twenty years (Australian Mathematical Sciences Institute, 2019).

Nationally, the number of students studying Intermediate and Advanced Mathematics as a percentage of the number of students completing Year 12 of secondary school has declined over the past 25 years. However, the patterns across states and territories vary greatly. Following on from the *Maths? Why Not?* project (McPhan et al., 2008), Jennings (2022, 2023) investigated enrolment trends in Queensland, New South Wales, and Victoria, and also reasons why Queensland students choose to / not to study Advanced Mathematics in the last two years of secondary school.

In this round table, I invite people to discuss strategies for turning around the number of students enrolling in Intermediate and Advanced Mathematics in the last two years of secondary school.

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