Maths hysteria
Why graduates like Adam Spencer are in demand

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**Magic in maths**

Big salaries and exciting jobs are available for those with a head for figures, writes **Rebecca Martin**.

The radio announcer Adam Spencer, a mathematical prodigy, is making a name for himself as a mathematical magician.

The ABC’s breakfast show host, who graduated from university with first-class honours in pure mathematics, has a passion for numbers and has even embarked on a PhD in the discipline before deciding to devote himself to a media career. For a MyCareer photo shoot he quickly and happily draws up a complex proof (de Moivre’s Identity) off the top of his head.

“They say that maths is music to which the symphonies of the universe are written,” Spencer says. “A lot of people respect the logic of it. But I think they can also explain beautiful things.”

While Spencer’s career path from mathematics studies to the media is unusual (but not unique), the range of careers available to those with a passion for figures is large and growing. Graduates work in fields including medicine, finance and tourism. Others are crunching figures for the environment, working in fields related to the climate. “Maths looks at the data and tells you how reliable the models are and how much data you need to get sense out of the model,” he says.

However, most mathematicians work in finance, typically in superannuation, insurance, risk and marketing. “There is a lot of money for climate change, but the banks have plenty of money, too, and they best appreciate what maths can do for them,” Franklin says.

The demand for mathematicians has been compounded by fewer graduates. The Australian Mathematical Sciences Institute says only 0.4 percent of graduates in Australia come from the field of mathematics, compared with an OECD average of 1 percent. Salaries are yet to catch up fully with demand. Straight maths graduates average $46,000 a year, the institute says – less than engineering graduates.

The director of recruitment firm Brainspot Resources, James Hone, says mathematicians earn a wide range of salaries. There is big money for those who take their studies beyond the undergraduate level. “There are roles in risk management where someone with five years’ experience can earn in excess of $200,000,” he says. “But a market risk person is quite different from a senior analyst in consumer risk.

“There can be a large gap in salaries there. Most of the consumer risk, marketing, pricing, performance management and fraud [roles] fall into a similar category.”

Clio Crowe, author of Mathematics And Sex and a maths lecturer at Sydney University, says that unlike law or dentistry, there are no “maths practices”.

“Mathematicians get placed within companies, and most companies want one because they need critical and problem-solving,” she says. “One of the people I went to uni with斗 fire fighters. There are roles in risk management where someone with five years’ experience can earn in excess of $200,000.”

“Looking at how a fire spreads is the same as looking at how certain option prices move,” she says.

David Maher scored a job with one of the big four banks before he had finished his doctorate in pure mathematics. “As a postgraduate, the jobs are incredible, so I wouldn’t be worried about your career if you are taking that [study] option.”

The stereotype of the nerdy maths student no longer applies, he says. “If you are very nerdy and can’t communicate ideas, you won’t be able to work in finance. You see the need for communication skills on a lot of jobs.”

Leisa Dyer, an honours graduate in applied mathematics, used her training to get a job at the heart of nuclear power in Sydney, working for the Australian Nuclear Science and Technology Organisation at its plant at Lucas Heights. “I wasn’t interested in working in finance, I just wanted to work with the environment and also help people,” she says. Her job involves environmental monitoring at Lucas Heights, measuring radioactivity levels and monitoring at Lucas Heights, measuring radioactivity levels and storage of nuclear waste.

The ABC’s mathematical genius is consistently looking for work at an average of $110,000 a year. As a nuclear engineer, she earns less than $120,000 but says the work is more meaningful and a good career move.

“Nuclear engineering looks at the data, and you can apply math to everything,” she says.

“Maths can be intimidating. People notice it.”