

Astrostatistics

Asad Ali's work seeks to help answer questions like 'How did the universe begin? Does time have a beginning and an end? Does space have edges?'

"My work stems from a NASA project that will use a new type of telescope called LISA, a laser interferometer space antenna, to 'see' the gravitational waves generated by physical events such as supernova, binary stars and super-massive black holes in distant galaxies.

"My work relates to developing statistical methods by which the highly complex signals from LISA can be deciphered and understood. What I enjoy about statistics is its comparison and prediction power; it enables us to understand, compare and predict the changes and events occurring around us."

Asad Ali holds a Bachelor of Science in Mathematics and Statistics, a Master of Science in Statistics, a Master of Philosophy in Statistics and a PhD.

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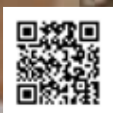
Sports statistics

Bobby Willcox is the Silver Ferns' secret weapon. The team's performance analyst, she scrutinises how each netballer meets the demands of her position and creates player types according to strengths, weaknesses and strategy preferences – information that helps coaches make selection and training decisions.

"I love statistics and sport, and it's pretty cool that I can combine the two. Performance analysis is exploding as a field – professional sportspeople want every possible tool to be their best."

Bobby Willcox holds a Bachelor of Arts and Bachelor of Science majoring in Classical Studies, Mathematics and Statistics; a Postgraduate Diploma of Science in Statistics, a Master of Science in Statistics, and a PhD.

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Marketing statistics

Bonnie Law works as a senior manager in customer intelligence at Westpac.

"I lead a team that uses data mining and analysis to gain insights and in-depth knowledge of our customers, so we understand what drives them to the bank and how we can retain their business."

"I use data from many different sources: demographic information such as income, household composition and socio-economic status, and internal data such as what products customers hold and their balances to segment them into groups who may have different needs and a propensity to purchase certain products."

"Statistical work in marketing is really fun because I get to discover lots of interesting trends and insights. No two days are the same, and it's a journey of continuous discovery."

Bonnie Law has a Bachelor of Science (Hons) in Statistics and a PhD.

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Forensic statistics

Hannah Kelly helps fight crime using statistics.

"I work on the interpretation of DNA. DNA can be recovered from a crime scene and linked to a person of interest, but sometimes it's hard to 'read'.

"If the amount of DNA recovered from a crime scene is very small, maybe from a cigarette butt or a single hair, or the DNA is damaged because, say, it has been in a fire, the DNA profile may be incomplete, so we use statistics to calculate the likelihood of a match between the crime scene item and the suspect's profile.

"It's good to know that your work is helping people to get justice."

Hannah Kelly is a PhD student, working at Environmental Science and Research (ESR). She holds a Bachelor of Arts in Geography and Political Studies, a Postgraduate Diploma in Forensic Science and a Master of Science in Forensic Science.

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Researching wind energy

Our world is under threat from climate change and global warming, says Ke Nan, and we can't ignore how our day-to-day activities contribute.

"By studying the statistics generated by the New Zealand wind industry, looking at economics, environmental impact, and power generation, we can gain a better understanding of how to make wind-generated power a viable option for the future, both environmentally and economically."

"I started studying statistics a bit by chance. When I was planning my university study, one of my friends suggested taking statistics because I was good at maths. I found it was interesting ... and that put me on my career path."

Ke (Kim) Nan is a PhD student. He holds a Bachelor of Economics in International Economics and Trade, a Diploma in Statistics and a Master of Science in Statistics.

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Actuarial science

Marina Ivanova works as an actuarial analyst for life insurance company Sovereign.

“Actuaries are at the heart of an insurance company and are crucial to its profitability and success.

“Their work is about helping the company make the best financial decisions and my role includes creating new products, setting customer premiums, tracking claims trends and evaluating performance. I love the variety in my job, as no two days are the same.

“Statistics was a natural choice for me. I’m fascinated by the magic of numbers and working with them is like a game. I enjoy using my statistical knowledge and skills to answer practical questions.”

Marina Ivanova has a Bachelor of Science (Hons) in Economics and a Master of Science in Statistics.

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Finance

Nick Gray is a long-term interest rate trader for Deutsche Bank in Sydney, where his main responsibilities are trading Australian and New Zealand interest rates.

"Through looking at things like pricing models, the economics that drive financial markets and risk management, I'm able to take risk to support views on where interest rates are going. I also provide liquidity to clients who have interest-rate exposure as part of their business operations.

"I may be a little biased, but it would be hard to find another subject that is so widely applicable and useful to employers across the globe as statistics."

Nick Gray has a Bachelor of Commerce in Finance and a Bachelor of Science in Applied Mathematics and Statistics.

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Teaching statistics

Shan-I Lee is a mathematics and statistics teacher at Auckland Girls Grammar School.

"In our personal and professional lives, it's really important to be able to critically examine the statistics behind the 'facts' we hear. What I really enjoy about statistics is its relevance and usefulness, whether that's determining the efficiency of new drugs or identifying new social trends.

"I always encourage my students to further their studies of statistics at tertiary level, as a second major or minor. It provides them with a distinct advantage."

Shan-I Lee holds a Bachelor of Science and Bachelor of Education in Mathematics.

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