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Local doctor makes a difference with numbers, not medicine

A Sunshine Coast Hospital and Health Service (SCHHS) scientist is making a difference with numbers, not medicine.

With a Doctor of Philosophy (PhD) in mathematics, 37 year old Dr Ruth Luscombe is using her maths and modelling expertise to help the Sunshine Coast Hospital and Health Service (SCHHS) manage its resources more efficiently at Nambour General Hospital.

“I was awarded a PhD in Mathematics from the Queensland University of Technology in 2016 and started working with the SCHHS in October, 2016. I had also worked here prior to my PhD, in fact it was my original job at the SCHHS that inspired my PhD research,” Dr Luscombe said.

Dr Luscombe said part of applied mathematics was working with people in other domains, and that’s what excites her, applying her ‘tricks and techniques’ to solve complex problems.

“The cool thing about medicine and hospitals is that they are always evolving; they are always trying to improve the treatments they give, their understanding of the human body, and the best way to treat patients,” Dr Luscombe said.

“To support this continual program of improvement there is lots of data collected and lots of analysis to do. Part of my job is interpretation of patterns and part of my job is making models to improve processes, to drive efficiency and effectiveness within the hospital.”

It all adds up!

“At high school I didn’t know what I wanted to do, I didn’t even know that being a mathematician was a job that you could have,” Dr Luscombe said.

“I found my career path by following things that sounded interesting and working hard.

“People think that a mathematician is either a statistician or a maths teacher, but what I love is cool data analysis and writing computer programs that solve real-life problems.

“I’m a specialist in the field of Operations Research and health care analytics.

“Operations Research is a branch of mathematics that is used to improve the efficiency and effectiveness of businesses and systems.

“Timetabling, scheduling and logistics are examples of areas where Operations Research is heavily used.
“My work at the hospital looks at many things, like how staff are scheduled in the hospital, how patients move through the health care system, and how to make improvements in efficiency.

“I’m proud to be making a difference to how we are able to deliver healthcare to our patients.”

Ruth is a member of the Australian Mathematical Society, an active Science, Technology, Engineering and Mathematics (STEM) practitioner, a maths student mentor, a member of the Homeward Bound project going to Antarctica with 77 other female scientists later this year – and to top that off she is receiving an Outstanding Doctoral Thesis Award this year.

**A once-in-a-generation opportunity**

Dr Luscombe is just one of the 5500 exceptional people helping to deliver exceptional healthcare at the Sunshine Coast Hospital and Health Service.

Executive Director, Human Resources, Nicholas Lake said the Sunshine Coast Hospital and Health Service was growing its workforce to meet the increasing health care needs of the community.

“We are committed to finding people who will continue to drive a culture of excellence in patient care,” Mr Lake said.

“The recruitment of staff for the Sunshine Coast University Hospital (SCUH) has been occurring selectively and deliberately over the past year or so, with the final large scale recruitment campaign well underway.

“More than 90 senior medical officers, and over 1500 nursing, allied health operational services and administrative roles are to be filled by the time SCUH opens in April next year.

“The opportunity to be part of the development of a major new tertiary level hospital is very attractive to people who want to be part of this once-in-a-generation opportunity for our health service to transform the way healthcare is delivered to our communities,” he said.

To view the current job vacancies at Sunshine Coast Hospital and Health Service visit [www.schealthjobs.com](http://www.schealthjobs.com)

**ENDS**

**Media contact:** Kirsty Olsen | 5470 6616 | 0408 713 747

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