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Stochastic Modelling - randomly coming up with things that could be

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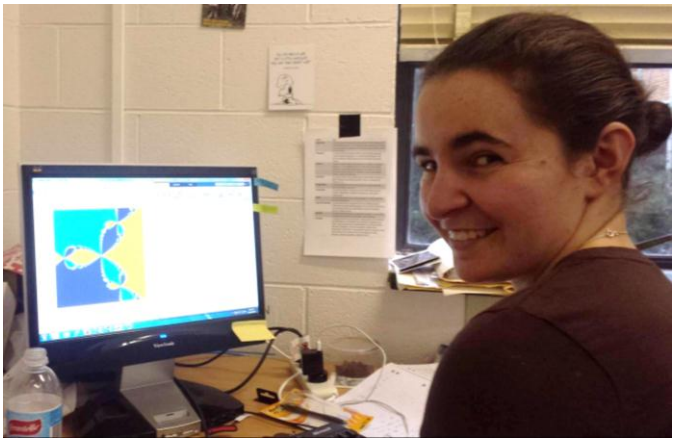

Have you ever wanted to know the future? Or know with what chance that a certain thing will occur? Do we really have a choice in how our lives turn out or is it just a series of predetermined events?

Well, I am currently studying mathematics, and I can hear you all say, how does that relate to determining the future?

My area of study is called stochastic modelling, which leads to other questions. Stochastic is just a fancy name for random and modelling is a plan of what could be. So, stochastic modelling is randomly coming up with things that could be.

That means that I look at all possible outcomes of a situation and depending on how the model is acting, I can say what the probability of any of those outcomes will be.

An example here might be good so, imagine you are living off tank water. You want to know how much water is in your tank. You also know that the weather changes often and stochastically (at random), and if it is raining the amount of water in your tank will go up, however if it is sunny then the amount of water in your tank will go down. Using how often the weather changes from sunny to rainy and back again, we can calculate how much water is currently in your tank.

My maths degree has taught me how to think logically, and in the case of stochastic modelling, to think out what the possible paths are for a certain model.

Maths is fun. You can fill your head with numbers and letters. Not to mention with it you can travel the world. Recently I attended a conference in Budapest, Hungary. There I met a lot of world famous mathematicians from my specific area and they were all lovely people. It was an adventure, seeing a new place, meeting new people and exploring some of the mathematics underpinning nature.

Find out more: www.utas.edu.au/maths-physics