

# Modelling of Infectious Diseases

## CPD MASTERCLASS WORKSHOP

### James Cook University warmly invites you to a five day interactive Modelling of Infectious Diseases Masterclass Workshop.

This continuing professional development (CPD) masterclass is aimed at providing participants with an understanding of infectious disease modelling and some basic programming skills.

What distinguishes this workshop from other modelling courses is that we use R, a freely available language and environment for statistical computing and graphics.

This masterclass workshop delivers basic practical skills in developing and coding mathematical models to understand transmission dynamics of infectious disease such as COVID-19. Additionally, this will establish a foundation for further research or facilitate critical appraisal of mathematical modelling.

#### WHO CAN ATTEND?

Anyone including undergraduates, postgraduates, and science-related professionals interested in mathematical modelling can register for this masterclass. The workshop will also be applicable to health professionals such as doctors, nurses, epidemiologists and public health workers.

#### PRIOR KNOWLEDGE REQUIRED

Basic familiarity with R is beneficial for the masterclass. We will provide students the materials and opportunities of an introduction to R as pre-learning to be complete prior to the masterclass.

After you register and purchase a ticket for the masterclass, you will receive introductory materials and you will be required to work through the R-test provided prior to the masterclass. If you pass the R-test, then you'll continue onto the face to face masterclass workshop. If you aren't able to pass the test then we will offer you a full refund for your ticket cost. The R-test can be completed multiple times, but must be completed and passed by the deadline provided (18 June 2023).

**DATE:** Monday 10 to Friday 14 July 2023

**TIME:** 8.30am to 4pm (Monday to Thursday); 8.30am to 3pm (Friday)

**LOCATION:** JCU Cairns, Nguma-bada campus, Smithfield

**MODE:** Face to face

**COST:** Early bird \$2,000 (closes 31 January 2023); Full price \$2,400 (closes 11 June 2023)

**REFRESHMENTS:** Morning tea, lunch and afternoon tea will be provided.

#### PRESENTERS INCLUDE:

##### *Professor Emma McBryde*

Professor Emma McBryde is an infectious diseases physician and her research work has focused on infectious diseases population dynamics. In particular, Professor McBryde has worked on mathematical and statistical modelling of diseases such as tuberculosis, COVID19, SARS and Ebola.

##### *Associate Professor Roslyn Hickson*

Associate Professor Roslyn Hickson is the joint JCU and CSIRO Science Leader for Emerging Infectious Diseases. Her research is broadly on informing policy and practice through the mathematical modelling of infectious diseases, with a focus on emerging and neglected tropical diseases through the dual lenses of biosecurity and One Health.

##### *Dr Michael Meehan*

Dr Michael Meehan is an applied mathematician who specialises in modelling the transmission dynamics of infectious diseases. He has previously developed models for COVID-19 and tuberculosis, and is particularly interested in genomic-driven infectious disease modelling.

# Explore Cairns and Tropical North Queensland

What is your ideal holiday? Relaxing on a tropical beach or secluded island? Exploring lush rainforests and waterfalls? Tasting fresh local produce and fine dining? Thrill seeking and adrenalin pumping activities? Fun outdoor activities for the whole family? Whatever it may be, Cairns is the perfect holiday destination offering a diverse range of natural landscapes and activities.

## Where the ocean meets the rainforest

Explore not one, but two World-Heritage-listed natural environments, as Cairns is home to the Great Barrier Reef and the Wet Tropics Rainforest.

## Adventure

Get your heart racing with a variety of thrill seeking activities including bungee jumping, mountain biking, para-sailing, snorkelling, skydiving, jet skiing, zip lining, or white water rafting, just to name a few.

## Taste of the tropics

Whether it be tasting exotic cuisines and local fresh produce, relaxing at a waterfront restaurant or bar, there's something for everyone's taste in Cairns.



## Island paradise

Surround yourself with crystal-clear waters, and beaches lined with palm trees. Green Island and Fitzroy Island are two of the most popular islands in the region, with the option to take a day trip or stay on the islands at the local resort.

## Where to stay

JCU's main campus in Cairns is based in the northern suburb of Smithfield (14-88 McGregor Road, Smithfield).

Palm Cove and Trinity Beach are both located in Cairns' northern beaches, which is a short drive (8 to 13 minutes) from the JCU campus at Smithfield. There are plenty of accommodation and dining options here and beautiful beaches to relax and enjoy.

The Cairns City is also close by (approximate 17 minute drive to JCU Smithfield campus) and offers many accommodation and dining options, including those on the Cairns Esplanade.

[Find out more about the Cairns region.](#)

