PRISM International Conference
20th-24th August 2018

Alamanda Palm Cove Boutique Hotel
1 Veivers Road
Palm Cove QLD 4879

Summary

This conference will bring together experts from various disciplines and backgrounds under the 4 PRISM themes: Immunisation, Respiratory Viruses, Emerging Infectious Diseases and New Methods for Simulation and Modelling. More information on our consortium, our staff and focus can be found on our website: http://prism.edu.au/theme/

The aim of our conference is to strengthen local and regional networks and provide a platform to share strengths and capabilities as well as explore new avenues to pursue in the context of Methods and Applied Mathematics.

The Conference will take place over 4 days. An initial policy workshop (Tuesday 21st August) will be oriented towards policy advisors, public health professionals, epidemiologists and clinicians who make use of modelling outputs. Conference day 1 (Wednesday 22nd August) will focus on modelling applications for policy and practice and may further be of interest to the group attending the initial Policy workshop. Conference day 2 (Thursday 23rd August) will be more methodologically oriented, running into technical workshops for individuals with existing modelling expertise on Friday 24th August.

How to register

Registrations and abstract submissions will open by March and a link with further details will be provided via email notification.

Two forms of registration are available, with arrivals from Monday 20th August:

*Two day package** – Policy workshop and modelling applications focus (Tuesday, Wednesday);

Three day package – Conference and technical workshops focus (Wednesday-Friday)

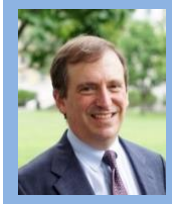
Contributed talks

There will be scope for contributed talks and you will have the opportunity to submit abstracts when registering your attendance.

For further information or if you have any questions, please send your query to our central contact address: prism-contact@unimelb.edu.au.

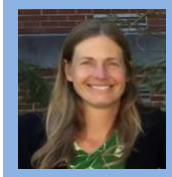
Invited Speaker Biographies

Invited Speakers PRISM International Conference



Marc Lipsitch
Harvard T.H. Chan School of Public Health.
Director Centre for Communicable Disease Dynamics.
NIH/NIGMS MIDAS Centre of Excellence.

Cécile Viboud,
Fogarty International Center, U.S National Institute of Health



Katia Koelle
Emory University

Julia Gog
University of Cambridge

Lisa White
University of Oxford

Niel Hens
Hasselt University.
University of Antwerp

Adam Kucharski
London School of Hygiene & Tropical Medicine

Marc Lipsitch

Marc Lipsitch is Professor of Epidemiology at the Harvard T.H. Chan School of Public Health and Director of the Center for Communicable Disease Dynamics (CCDD), an NIH/NIGMS MIDAS Center of Excellence. He is an author of more than 250 peer-reviewed publications on the impact of medical and public health interventions on the spread and evolution of infectious disease agents, and the consequences of these changes for human health. He has played a leading role in epidemiologic responses to infectious disease outbreaks, from SARS to pandemic influenza and Ebola. Ongoing studies of pandemic preparedness and response focus on preparedness for clinical trials in outbreaks. In addition, current research includes the application of population genomics to understand the spread of infections and the changes produced in bacterial population by human immunity, and modelling the effects of pneumococcal vaccination. He has contributed to our understanding of influenza seasonality, disease burden estimation, epidemiology of antimicrobial resistance, and novel methods for infectious disease epidemiology and modelling. Experimentally, his laboratory studies the immunity and antimicrobial resistance in Streptococcus pneumoniae, combining molecular biology and animal studies with population genomics, epidemiology and mathematical modelling.

Cecile Viboud

Cecile Viboud is a senior research scientist in the Division of International Epidemiology and Population Studies of the Fogarty International Center, National Institutes of Health, USA. Her research focuses on the epidemiology and transmission dynamics of acute viral infections, at the interface of public health and computational modelling. Her work has primarily concentrated on the epidemiology of respiratory viruses and pandemic influenza, but she has recently become interested in zoonotic infections, the potential of Big Data to strengthen infectious disease surveillance, and forecasting approaches.
A native of France, she received an engineer degree in biomedical technologies from the University of Lyon (1998), a Master of Public Health (1999) and a PhD in Biomathematics (2003) from Pierre and Marie Curie University, Paris, France.

Katia Koelle

Katia Koelle is an Associate Professor in the Department of Biology at Emory University. She has her PhD in Ecology and Evolutionary Biology from the University of Michigan (2005) and recently joined the Department of Biology at Emory after a decade on the faculty at Duke University. Her research interests include the development of mathematical models to better understand patterns of viral evolution and disease dynamics between and within human hosts. She is further interested in the development and application of statistical approaches to characterize disease spread from viral sequence data. She works primarily on the 'phylodynamics' of RNA viruses, most notably influenza and dengue. Her research program currently spans primarily four topics of inquiry: (1) Understanding the interplay between viral evolution and the epidemiological spread of viral infectious diseases. (2) Understanding constraints on viral adaptation. (3) Understanding interindividual variation in within-host viral dynamics and evolution. (4) Understanding the impact of control measures of the epidemiological and evolutionary dynamics of viral infectious diseases.

Julia Gog

Julia Gog is the Professor of Mathematical Biology at the Department of Applied Mathematics and Theoretical Physics, University of Cambridge. She is also the David N. Moore Fellow at Queens' College, Cambridge. Julia's research interests are mainly in the dynamics and evolution of influenza. Part of her work is at the mathematical theory end, particularly in developing tractable approaches to modelling multiple strains and pathogen evolution, and also bioinformatic methods for application to viruses. Recent projects have also included large dataset analysis, including to understand the spatial patterns of influenza spread in the US. Julia and colleagues have also recently been busy with a big citizen science project, the "BBC pandemic", studying movement and contact patterns of many volunteers in the UK, partly for BBC documentary but also to generate a large dataset available to all scientists.

Lisa White

I am currently the head of an Oxford University mathematical and economic modelling (MAEMOD) group based in Thailand at the Mahidol-Oxford Tropical Medicine Research Unit whose research focus is on tropical infections and primarily malaria. MAEMOD coordinates an international network of infectious disease modellers and modelling research beneficiaries working in the Tropics (TDModNet). My work on malaria combines within and between host infection models with multi-strain/species modelling to consider the characterisation, emergence and spread of antimalarial drug resistance and its containment. I have strong collaborative links with the National Center of Malaria Control (CNM) in Cambodia and members of the WHO concerned with the containment of artemisinin resistance in its focus in Western Cambodia. I was also an active member of Malaria Eradication Research Agenda (malERA) an international consultative initiative aimed at identifying current knowledge gaps and new tools needed for malaria eradication. I am now developing mathematical models to be used as tools for national and international malaria elimination strategy design in the Asia Pacific Region. A large part of this approach will be to build capacity in the region for performing mathematical modelling research and for policymakers to access these new human resources effectively.

Niel Hens

Niel Hens is Professor at Hasselt University and the University of Antwerp where he is holder of the chair in evidence-based vaccinology. He has a background in mathematics and biostatistics and obtained a PhD in biostatistics in 2005 on the topic of 'Non- and Semi-parametric Techniques for Handling Missing Data'. During the completion of his PhD, he developed interest in modelling infectious diseases and participated in an EU FP6 project called POLYMOD on collecting social contact data relevant for the spread of infectious diseases in Europe. Using social contact data and serological data he has led the development of statistical methodology to estimate important infectious disease parameters. This has led to the publication of a successful monograph (Hens et al. Modelling Infectious Disease Parameters Based on Serological and Social Contact Data, Springer-Verlag, New York, 2012). In 2016, he was awarded an ERC consolidator grant for his work related to the aforementioned topic.

Adam Kucharski

Adam Kucharski is an Assistant Professor and Sir Henry Dale Fellow in the Department of Infectious Disease Epidemiology at the London School of Hygiene & Tropical Medicine. He is interested in how social behaviour and immunity shape disease transmission, and how knowledge of such processes can enhance surveillance and control measures. He worked on real-time modelling analysis during the 2013–16 Ebola epidemic in West Africa, and has also been involved in analysis of influenza, dengue fever and Zika outbreaks. From 2013–17 he held a Medical Research Council Career Development Award in Biostatistics, and prior to joining LSHTM he was a research associate at Imperial College London.

*** Overview Policy Workshop 2 day package (invited/targeted audience only):**

This introductory workshop will give participants an understanding of infectious disease models and their value for public health. The workshop will cover the use of modelling to examine disease causes and to assess strategies for control in the context of a variety of infectious diseases. No prior detailed knowledge of modelling infectious diseases or epidemiology is required and only high school level mathematics is needed.