

# PRISM International Conference

## 20<sup>th</sup>-24<sup>th</sup> 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 with the 2 days of the main conference targeted towards researchers engaged in infectious diseases modelling, Epidemiologists, clinicians and public health professionals who make use of outputs from these models and who wish to hear about the latest research:

- Day 1 - Arrivals and Registrations
- Day 2 - Policy workshop (target audience)
- Day 3 - Conference
- Day 4 - Conference
- Day 5 - Technical workshops

### How to register

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

We encourage those that are interested in attending to notify us at [prism-contact@unimelb.edu.au](mailto:prism-contact@unimelb.edu.au) by **the 16<sup>th</sup> of February 2018 5pm Australian Eastern Standard Time**. We ask you confirm your interest this early in order to secure venue arrangements. Please also mention if you are interested in part of or all of the conference (i.e. Days 3 and 4 or Days 3,4 and 5)

### 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](mailto:prism-contact@unimelb.edu.au).

## 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



**Niel Hens,**  
Hasselt University.  
University of Antwerp



**Adam Kucharski,**  
London School of Hygiene &  
Tropical Medicine

## Invited Speaker Biographies

### 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 'phylogenetics' 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.

**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.