

Welcome!

WARWICK
THE UNIVERSITY OF WARWICK

Mathematical modelling of behaviour to inform policy for societal challenges

MIRaW – Mathematical Interdisciplinary Research at Warwick



JUNIPER

<https://maths.org/juniper/>

@JuniperConsort1

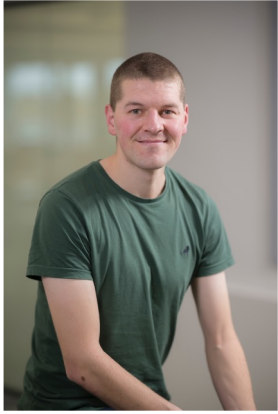
Housekeeping/notices

Timetable:

09:30-10:00	Registration	
10:00-10:15	Introduction	Organisers
10:15-10:45	Invited talk 1 & initial discussion	Kavita Vedhara
10:45-11:15	Break	
11:15-11:45	Invited talk 2	Anne Kandler
11:45-12:15	Invited talk 3	Suzy Moat & Tobias Preis
12:15-12:45	Contributed talks (5 x 5 minutes)	Elaine Ferguson Mark Lynch Luisa Fernanda Estrada Plata Matt Ryan Fanqi Zeng
12:45-14:00	Lunch	
14:00-14:30	Invited talk 4	Alice Milne
14:30-15:00	Invited talk 5	David Haw
15:00-15:40	Break	
15:40-16:10	Invited talk 6	Ruth McCabe
16:10-16:40	Discussion + Close	
16:40-18:00	Drinks Reception	

Refreshments during breaks,
lunch and drinks reception all
in **B1.41 common room**

Who are we?



- **Research interests:** Addressing interdisciplinary problems in epidemiology that involve the dynamics of behaviour.
- **Application areas:** Public, veterinary and plant health policy; zoonoses; implementation of One Health approaches to disease management.

[Ed Hill](#) (Warwick)

- **Research interests:** Mathematical epidemiological modelling, including the design and use of novel social contact behaviour to inform model parameterisation.
- **Application areas:** Unpicking the immunological and behavioural drivers of respiratory disease seasonality, exploring the role of educational institutions on respiratory disease epidemiology.

[Kirsty Bolton](#) (Nottingham)



Who are we?



- **Research interests:** Mathematical, statistical and computational modelling of infectious disease outbreaks within a One Health framework (the interconnection between humans, animals, plants, and their shared environment).
- **Application areas:** Enhancing global health and welfare through use of models to understand fundamental epidemiological processes and as predictive tools.

Emily Nixon (Liverpool)

Stephen Parnell (Warwick)

- **Research interests:** Epidemiology and modelling of plant disease outbreaks in managed and natural systems.
- **Application areas:** Practical focus on the use of epidemiological models to design surveillance and control strategies in plant health.



Who are we?



- **Research interests:** Decision making under uncertainty and structured expert judgement.
- **Application areas:** Household food security, pollination, digital archives and the energy sector.

Martine Barons
(Warwick)

Currently representing Great Britain at the AWPC European Championships in Salo, Finland!

Martine Barons & Rashidah Virgo at the British Single Lift championships; both qualified for the World Championships in August





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Principal Investigators

Professor Matt Keeling, University of Warwick
Professor Julia Gog, University of Cambridge

Senior Scientific Programme Manager

Dr Ciara Dangerfield, University of Cambridge

Co-Investigators

Dr Ellen Brooks-Pollock, University of Bristol
Dr Hannah Christensen, University of Bristol
Dr Leon Danon, University of Bristol
Professor Daniela De Angelis, University of Cambridge
Dr Louise Dyson, University of Warwick
Professor Ian Hall, University of Manchester
Professor Deirdre Hollingsworth, University of Oxford
Professor Thomas House, University of Manchester
Dr Christopher Jewell, Lancaster University
Dr Petra Klepac, University of Cambridge & LSHTM
Dr TJ McKinley, University of Exeter
Dr Lorenzo Pellis, University of Manchester
Dr Jonathan Read, Lancaster University
Professor Michael Tildesley, University of Warwick

Scientific Writers (Plus Magazine & Millennium Maths Project)

Rachel Thomas, University of Cambridge
Dr Marianne Freiberger, University of Cambridge

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AIMS

- Build an **inter-university community** of epidemiology modellers working at the interface of infectious disease control & public health policy
- Provide **support & training to the future leaders** of epidemic modelling in academic research & scientific advice to government.
- Be **outward facing** to the wider research community & general public

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PEOPLE

- Academics – *Julia Gog & Matt Keeling*
- Scientific Programme Manager – *Dr Ciara Dangerfield*
- Science writing – *the Plus team: Dr Marianne Freiburger and Rachel Thomas*
- Software Engineer – *Dr Alison Hale*



Dr Ciara Dangerfield
Programme Manager



Dr Marianne Freiburger & Rachel Thomas
Editors of PLUS, Science Writers



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Management board:

- Membership: two PIs, SSPM, plus 5-6 others on 1 year rotations
- Meet quarterly
- Allocation of ECR travel funds and agreeing areas for themed workshops

Governance board:

- Oversight of decisions of management board, and last resort in any dispute
- Informally: as friendly advisors to help aid strategy
- Starting point may include current Advisory Board, plus MRC and UKHSA representation

Transparency:

- Annual report to be on website, including decisions on spends and activities

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Activities

- Virtual seminar series & coffee catch-ups
- Support for grant/fellowship applications (e.g. letters of support)
- Researcher Exchange Programme (REP)
- Annual Meeting (Warwick, Bristol, Cambridge)
- Themed workshops (e.g. this one)
- Policy workshops (1 per year)

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How to join.....

Our webpage:

<https://maths.org/juniper>

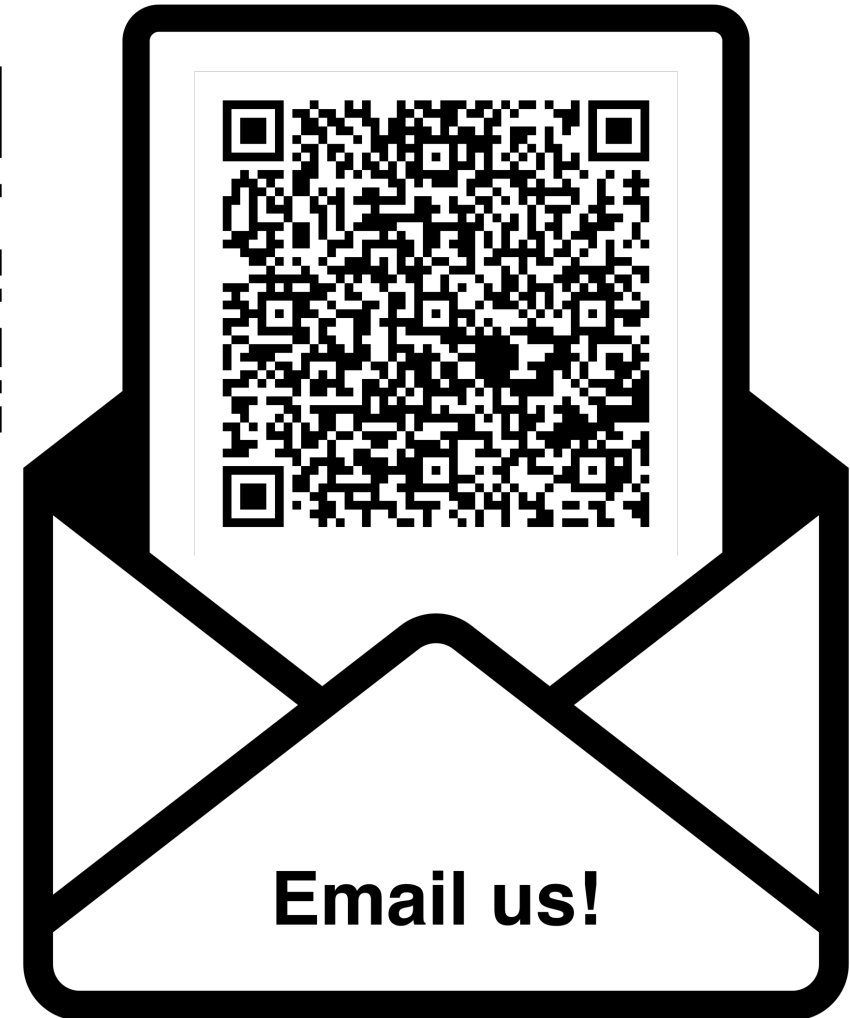


Our mailing list

[https://maths.us11.list-manage.com/subscribe?
u=6e33b37bf12282adec9fc7a85&id=1250a350e2](https://maths.us11.list-manage.com/subscribe?u=6e33b37bf12282adec9fc7a85&id=1250a350e2)

Contact us about joining our Slack channel

juniper@maths.cam.ac.uk

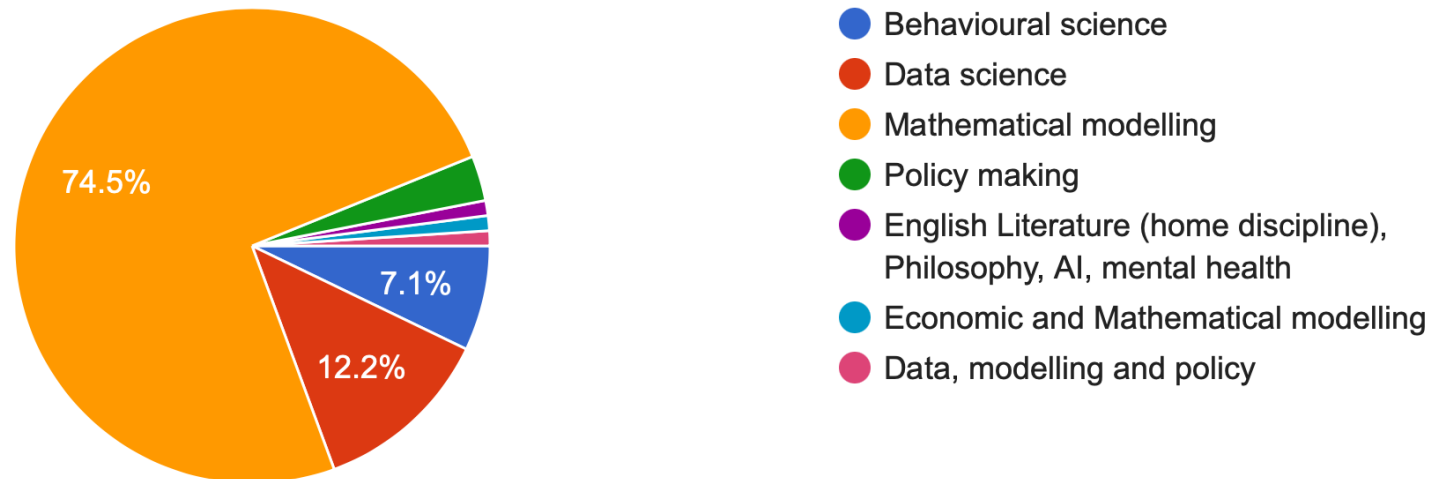


Who are you?

- **Over 50% consider themselves to be an Early Career Researcher**
- **Attendees from academic institutions, consultancies & civil service (UKHSA; DEFRA; APHA; Department for Levelling Up, Housing and Communities)**

What is your main interest area?

98 responses



The challenges?

Interdisciplinarity

Data

Understanding behaviour

Model selection

**Scientific
communication**

**Model
parameterisation**

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