

ROBIN THOMPSON

Christ Church, University of Oxford

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RESEARCH POSITIONS

- Oct 2017** – Christ Church, University of Oxford
Sep 2021 *Junior Research Fellowship in the Sciences*
Conducting independent research programme in mathematical epidemiology. Developing mathematical models of infectious disease outbreaks, parameterising them using statistical inference techniques, and using them for epidemic forecasting and assessing potential control interventions
- Dec 2019** – London School of Hygiene and Tropical Medicine
Nov 2020 *Assistant Professor (0.2 FTE)*
Conducting research into real-time modelling of infectious disease outbreaks. Using branching processes to explore the risk of flare-ups of emerging viruses in new locations (working with Dr Sebastian Funk)
- Mar 2016** – Department of Zoology, University of Oxford
Sep 2017 *Postdoctoral research assistant in Mathematical Epidemiology*
Built and analysed probabilistic models for the transmission and evolution of infectious diseases, with application to HIV (working with Dr Katrina Lythgoe)
- Dec 2015** – Department of Computer Science, University of Oxford
Feb 2016 *Postdoctoral research assistant in Computational Biology*
Developer of Lung Chaste, a computational model of the respiratory system (working with Professor David Kay and Dr Rafel Bordas)

EDUCATION

- Oct 2011** – Gonville and Caius College, University of Cambridge
Nov 2015 *PhD in Mathematical Biology*
Thesis title: Parameter inference and outbreak modelling for forecasting and optimising control of invading infectious diseases (Supervisors: Dr Nik Cunniffe and Professor Chris Gilligan, Department of Plant Sciences)
- Oct 2007** – Worcester College, University of Oxford
Jun 2011 *MMath in Mathematics, first class honours*
Dissertation title: Modelling cell migration and adhesion during development (Supervisors: Professor Ruth Baker and Dr Christian Yates)

PUBLICATIONS

35. White LF, Moser CB, **Thompson RN**, Pagano M. Statistical estimation of the reproductive number from case notification data: a review. In Press *Am J Epidem*

34. **Thompson RN**, Thompson MJ, Hurrell JW, Sun L, Obolski U. Assessing the threat of major outbreaks of vector-borne diseases under a changing climate. In Press *Astro Space Sci Proc*
33. Lourenço J, **Thompson RN**, Thèze J, Obolski U. Characterizing West Nile virus epidemiology in Israel using a transmission suitability index. In Press *Eurosurveillance*
32. **Thompson RN**, Hollingsworth TD, Isham V, Arribas-Bel D, Ashby B, Britton T, Challenor P, Chappell LHK, Clapham H, Cunniffe NJ, Dawid AP, Donnelly CA, Eggo RM, Funk S, Gilbert N, Glendinning P, Gog JR, Hart WS, Heesterbeek H, House T, Keeling M, Kiss IZ, Kretzschmar ME, Lloyd AL, McBryde ES, McCaw JM, McKinley TJ, Miller JC, Morris M, O'Neill PD, Pearson CAB, Parag KV, Pellis L, Pulliam JRC, Ross JV, Scalia Tomba G, Silverman BW, Struchiner CJ, Tildesley MJ, Trapman P, Webb CR, Mollison D, Restif O. Key questions for modelling COVID-19 exit strategies. *Proc Roy Soc B* 287: 20201405.
31. **Thompson RN**. Epidemiological models are important tools for guiding Covid-19 interventions. *BMC Med* 18: 152, 2020
30. Hart WS, Maini PK, Yates CA, **Thompson RN**. A theoretical framework for transitioning from patient-level to population-scale epidemiological dynamics: influenza A as a case study. *J Roy Soc Interface* 17: 20200230, 2020
29. Abbott S, Hellewell J, **Thompson RN**, Sherratt K, Gibbs HP, Bosse NI, Munday JD, Meakin S, Doughty EL, Chun JY, Chan Y-W D, Finger F, Campbell P, Endo A, Pearson CAB, Gimma A, Russell T, CMMID COVID modelling group, Flasche S, Kucharski AJ, Eggo RM, Funk S. Estimating the time-varying reproduction number of SARS-CoV-2 using national and subnational case counts. *Wellcome Op Res* 5: 112, 2020
28. **Thompson RN**, Lovell-Read FL, Obolski U. Time from symptom onset to hospitalisation of coronavirus disease 2019 (COVID-19) cases: Implications for the proportion of transmissions from infectors with few symptoms. *J Clin Med* 9: 1297, 2020
27. **Thompson RN**, Cunniffe NJ. The probability of detection of SARS-CoV-2 in saliva. *Stat Meth Med Res* 29: 1049-1050, 2020
26. **Thompson RN**. Pandemic potential of 2019-nCoV. *Lancet Inf Dis* 3099: 30068, 2020
25. **Thompson RN**. Novel coronavirus outbreak in Wuhan, China, 2020: Intense surveillance is vital for preventing sustained transmission in new locations. *J Clin Med* 9: 498, 2020

24. Jung S-M*, Kinoshita R*, **Thompson RN***, Linton NM, Yang Y, Akhmetzhanov A, Nishiura H. Epidemiological identification of a novel pathogen in real time: Analysis of the atypical pneumonia outbreak in Wuhan, China, 2019-2020. *J Clin Med* 9: 637, 2020
23. Greischar MA, Alexander HK, Bashey F, Bento AI, Bhattacharya A, Bushman M, Childs LM, Daversa DR, Day T, Faust CL, Gallagher ME, Gandon S, Glidden CK, Halliday FW, Hanley KA, Kamiya T, Read AF, Schwabl P, Sweeny AR, Tate AT, **Thompson RN**, Wale N, Wearing HJ, Yeh PJ, Mideo N. Evolutionary consequences of feedbacks between within-host competition and disease control. *Evol Med Public Health* 1: 30-34, 2020
22. Hart WS, Hochfilzer LFR, Cunniffe NJ, Lee H, Nishiura H, **Thompson RN**. Accurate forecasts of the effectiveness of interventions against Ebola may require models that account for variation in symptoms during infection. *Epidemics* 29: 100371, 2019
21. **Thompson RN**, Stockwin JE, van Gaalen RD, Polonsky JA, Kamvar ZN, Demarsh PA, Dahlgvist E, Li S, Miguel E, Jombart T, Lessler J, Cauchemez S, Cori A. Improved inference of time-varying reproduction numbers during infectious disease outbreaks. *Epidemics* 29: 100356, 2019
20. Cullerne J, French A, Poon D, Baxter A, **Thompson RN**. The pedagogical power of context: extending the epidemiology of Eyam. *Phys Educ* 55: 015021, 2019
19. **Thompson RN**, Jalava K, Obolski U. Sustained transmission of Ebola in new locations: more likely than previously thought. *Lancet Inf Dis* 19: 1058-59, 2019
18. **Thompson RN**, Brooks-Pollock E. Preface to theme issue 'Modelling infectious disease outbreaks in humans, animals and plants: epidemic forecasting and control'. *Phil Trans Roy Soc B* 374: 20190375, 2019
17. **Thompson RN**, Brooks-Pollock E. Detection, forecasting and control of infectious disease epidemics: modelling outbreaks in humans, animals and plants. *Phil Trans Roy Soc B* 374: 20190038, 2019
16. **Thompson RN**, Thompson CP, Pelerman O, Gupta S, Obolski U. Increased frequency of travel in the presence of cross-immunity may act to decrease the chance of a global pandemic. *Phil Trans Roy Soc B* 374: 20180274, 2019
15. **Thompson RN**, Morgan OW, Jalava K. Rigorous surveillance is necessary for high confidence in end-of-outbreak declarations for Ebola and other infectious diseases. *Phil Trans Roy Soc B* 374: 20180431, 2019

14. Obolski U, Gori A, Lourenço J, Thompson C, **Thompson RN**, French N, Heyderman R, Gupta S. Identifying genes associated with invasive disease in *S. pneumoniae* by applying a machine learning approach to whole genome sequence typing data. *Sci Rep* 9: 4049, 2019
13. **Thompson RN**, Wymant C, Spriggs RA, Raghwani J, Fraser C, Lythgoe KA. Link between the numbers of virus particles and variants founding new HIV-1 infections depends on the timing of transmission. *Virus Evol* 5: vey038, 2019
12. Somveille M, Firth JA, Aplin LM, Farine DR, Sheldon BC, **Thompson RN**. Movement and conformity interact to establish local behavioural traditions in animal populations. *PLoS Comp Biol* 14: e1006647, 2018
11. Abdullah N, Graham SC, Birch J, Kelly J, Goncalves-Carneiro D, Mitchell T, **Thompson RN**, Lythgoe KA, Logan N, Hosie MJ, Bavro VN, Willett BJ, Heaton MP, Bailey D. Structure-guided identification of a pathogen with pandemic potential. *J Virol* 92: e01248, 2018
10. Suffert F, **Thompson RN**. Some reasons why the latent period should not always be considered constant over the course of a plant disease epidemic. *Plant Pathol* 67: 1831-1840, 2018
9. **Thompson RN**, Hart WS. Effect of confusing symptoms and infectiousness on forecasting and control of Ebola outbreaks. *Clin Inf Dis* 67: 1472-1474, 2018
8. Obolski U, Lourenço J, Thompson C, **Thompson RN**, Gori A, Gupta S. Vaccination can drive an increase in frequencies of antibiotic resistance among non-vaccine serotypes of *Streptococcus pneumoniae*. *Proc Natl Acad Sci* 1: 201718712, 2018
7. **Thompson RN**, Gilligan CA, Cunniffe NJ. Control fast or control smart: when should invading pathogens be controlled? *PLoS Comp Biol* 14: e1006014, 2018
6. Raghwani J, **Thompson RN**, Koelle K. Selection on non-antigenic gene segments of seasonal influenza A virus and its impact on adaptive evolution. *Virus Evol* 3: vex034, 2017
5. Kraemer MUG, Faria NR, Reiner Jr RC, Golding N, Nikolay B, Stasse S, Johansson MA, Salje H, Faye O, Wint GRW, Niedrig M, Shearer FM, Hill SC, **Thompson RN**, Bisanzio D, Taveira N, Nax HH, Pradelski BSR, Nsoesie EO, Murphy NR, Bogoch II, Khan K, Brownstein JS, Tatem AJ, de Oliveira T, Smith DL, Sall A, Pybus OG, Hay SI, Cauchemez S. Spread of Yellow Fever Virus outbreak in Angola and the Democratic Republic of Congo 2015-2016: a modelling study. *Lancet Inf Dis* 17: 330-338, 2016
4. †**Thompson RN**, Gilligan CA, Cunniffe NJ. Detecting presymptomatic infection is necessary to forecast major epidemics in the earliest stages of infectious disease outbreaks. *PLoS Comp Biol* 12: e1004836, 2016

3. **Thompson RN**, Cobb RC, Gilligan CA, Cunniffe NJ. Management of invading pathogens should be informed by epidemiology rather than administrative boundaries. *Ecol Model* 324: 28-32, 2016
2. **Thompson RN**, Yates CA, Baker RE. Modelling cell migration and adhesion during development. *Bull Math Biol* 74: 2793-2809, 2012
1. Tappin SJ, Howard TA, Hampson MM, **Thompson RN**, Burns CE. On the autonomous detection of coronal mass ejections in heliospheric imager data. *J Geophys Res* 117: A05103, 2012

* Joint first authors

† This publication was awarded the PLoS Computational Biology Research Prize 2017 for its public impact in highlighting the need for accurate diagnostic tests for Ebola

IN THE NEWS

- Jan 2020 – Present** – Interviewed on the radio (BBC radio 4, LBC) and television (BBC, ITV, Channel 4), and featured in newspapers (including The Guardian, The Times, The Independent) and magazines (Science Magazine, Time Magazine, New Scientist) about research into the coronavirus disease 2019 (Covid-19) pandemic
- Jan 2020 – Present** – Appeared on podcasts including the ITV coronavirus podcast, Isaac Newton Institute podcast and *Power Corrupts – Pandemics*
- Mar 2020** – Wrote “How social distancing works” article for ITV
- Mar 2020** – Wrote “Commentary: Widespread interventions can bring Covid-19 pandemic under control” for Nature Research with Prof. Jinshan Wu
- Mar 2020** – Explained mathematical modelling of Covid-19 in documentaries on Channel 4 and the Discovery Channel
- Nov 2018** – Research into the effect of global travel on the pandemic risk featured in *New Scientist*, *The Metro*, *Daily Mail* and international newspapers

PRIZES AND GRANTS

- Apr 2020** – *NERC – Named Postdoctoral Researcher, “Tackling AMR in the Environment India” grant (£800,000; responsible for £24,662)*
Member of a project investigating the impact of pharmaceutical waste on the environment and local community of a manufacturing hub in India
- Mar 2020** – *Royal Society – Principal Investigator, International Exchange grant (£6,000)*
To develop a collaboration with Dr Shingo Iwami (Kyushu University, Japan) for the project “A combined mathematical-experimental theory of superinfection”
- Mar 2020** – *EPRSC – Principal Investigator, Undergraduate Vacation Bursary (£4,635)*
For undergraduate student Matthew Penn to undertake the project “Using mathematical modelling to optimise vaccination strategies”

- Jan 2020** *London Mathematical Society – Principal Investigator, Computer Science small grant (£800)*
To develop a collaboration with Dr Shingo Iwami (Kyushu University, Japan) to understand the within-host and population-scale dynamics of multi-strain pathogens
- Jan 2020** *Edinburgh Mathematical Society – Co-Investigator, Research Support grant (£800)*
To visit Dr Ruth Bowness (University of St Andrews) to plan British Applied Mathematics Colloquium mini-symposium “Multi-scale infectious disease outbreak models”
- Apr 2019** *BBSRC – Principal Investigator, Research Experience Placement bursary (£3,700)*
For undergraduate student Silvia Shen to undertake the project “Estimating the risk of flare-ups of infectious disease in new locations”
- Aug 2018** *Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship (£4,962)*
To undertake research for two months at the University of Hokkaido, Japan, with Professor Hiroshi Nishiura
- Apr 2018** *London Mathematical Society – Principal Investigator, Undergraduate Vacation Bursary (£1,440)*
For undergraduate student Francesca Lovell-Read to undertake the project “The canary in the coal mine: using mathematics to improve surveillance for plant pathogens”
- Mar 2018** *EPRSC – Principal Investigator, Undergraduate Vacation Bursary (£2,380)*
For undergraduate student Leonhard Hochfilzer to undertake the project “Multi-scale models of infectious disease epidemics”
- Mar 2018** *EPRSC – Principal Investigator, Undergraduate Vacation Bursary (£2,380)*
For undergraduate student Thomas Critchley to undertake the project “Optimal targeting of HIV-1 interventions towards at-risk populations in coastal Kenya”
- Nov 2017** *PLoS Computational Biology Research Prize 2017 (£1,800)*
For research paper in PLoS Computational Biology with highest public impact
- Jun 2017** *Oxford University student-led teaching award nominee*
Nominated in the “Outstanding Tutor” category
- Feb 2017** *Keystone Future of Science Award (£1,000)*
For modelling HIV-1 transmission between hosts, to permit travel to the Keystone symposium “Modeling Viral Infections and Immunity” in USA
- Apr 2016** *EPRSC – Principal Investigator, Undergraduate Vacation Bursary (£2,254)*
For undergraduate student William Hart to undertake the project “Choosing appropriate mathematical models for planning control of invading pathogens”
- Apr 2016** *Wellcome Trust – Principal Investigator, Summer Research Experience Placement bursary (£1,750)*

For undergraduate student Lauren Enright to undertake the project “Incorporating host heterogeneity into models of virus evolution”

- Dec 2012** *University of Lincoln academic grant (£2,000)*
For a research visit to Lincoln, New Zealand, to work with Professor Don Kulasiri
- Nov 2012** *Frank Smart studentship (£1,000)*
Research award for studying the spread of citrus greening disease in Florida
- May 2012** *Best talk prize, SIAM student conference, Manchester*
- Oct 2011** *BBSRC G2O Doctoral Training award*

PRESENTATIONS

Conferences

- Aug 2020** Society for Mathematical Biology annual meeting (talk)
- Apr 2020** Conference on World Affairs, USA (invited panellist)
- Apr 2020** British Applied Mathematics Colloquium, Glasgow (chair of mini-symposium “Multi-scale infectious disease outbreak models”)
- Feb 2020** Verdantix Innovation Summit, London (invited as an expert in infectious disease modelling to answer questions about Covid-19 in a question and answer session)
- Nov 2019** Global Forum on Innovations for Marginal Environments – Food security topic stream, United Arab Emirates (UK government-funded delegate)
- Aug 2019** Summer Short Course on Infectious Disease Modelling, Japan (plenary talk)
- Feb 2019** Royal Society bilateral international meeting – Biomathematics topic stream (invited talk)
- Mar 2018** British Applied Maths Colloquium, St Andrews (invited talk)
- Jul 2017** Mathematical Models in Ecology and Evolution, London (talk)
- Jun 2017** Mathematical and Computational Evolutionary Biology, France (talk)
- May 2017** Modeling Viral Infections and Immunity Keystone symposium, USA (talk and poster)
- Aug 2013** International Congress of Plant Pathology, China (talk)
- June 2013** Society for Mathematical Biology Annual Meeting, USA (talk)
- Aug 2012** Models in Population Dynamics and Ecology, Brazil (talk)
- May 2012** SIAM National Student Conference, Manchester (talk)
- Dec 2010** American Geophysical Union fall meeting, USA (poster)

Workshops

- May 2020** Isaac Newton Institute workshop on “Models for an exit strategy” (organiser and session chair)
- Mar 2020** Interdisciplinary workshop on Mathematical and Empirical research in the Applied Life Sciences (iMEALS), South Korea (invited talk)
- Feb 2020** Mathematical modelling and statistical analysis of infectious disease outbreaks: heterogeneity in space, time and social structure, and virus evolution, France (invited talk)

- Jan 2020** International workshop on big data applications: forecasting and real-time intervention analyses, Japan (invited talk)
- Sep 2019** On growth and pattern formation: a celebration of Philip Maini's 60th birthday, Oxford (session chair)
- Aug 2019** UK Biosecurity roundtable: emerging infectious diseases and bioweapons, Oxford
- Jun 2019** EEID RCN-IDEAS Workshop on Within-host Competition and Disease Control, USA
- May 2019** NERC UK-India Antimicrobial Resistance Partnership Workshop, India (NERC-funded delegate)
- Mar 2018** R Epidemics Consortium meeting, London
- Aug 2016** ICERM Predictive Policing Workshop, USA
- Jun 2016** Hackout 3: Analysis and modelling tools for emergency outbreak response, USA
- Aug 2014** Dynamics of Infectious Diseases Summer School, Finland
- Aug 2013** International Epidemiology Workshop, China (poster)
- Jul 2013** Gates' Epidemiology Workshop, Cambridge

Seminars

- Jul 2019** IBM Deep Dive seminar, Kenya
- Jul 2019** CMMID seminar, London School of Hygiene and Tropical Medicine
- Jun 2019** George Institute for Global Health, Oxford
- May 2019** CSIR-National Chemical Laboratory Pune invited lecture, India
- Feb 2019** Department of Infectious Disease Epidemiology seminar, Imperial College London
- Feb 2019** Department for Applied Mathematics and Theoretical Physics seminar, Cambridge
- Feb 2019** Oxford University Invariant Society seminar
- Sep 2018** University of Tokyo Mathematical Biology seminar
- Jan 2018** WCMB mathematical biology meeting, Oxford
- Apr 2017** Department of Zoology infectious diseases seminar, Oxford
- Mar 2017** University of Bath mathematical biology seminar
- Feb 2015** Lady Margaret Hall mathematics seminar, Oxford
- Jul 2014** Department of Plant Sciences mathematical epidemiology seminar, Cambridge
- Jan 2013** University of Lincoln mathematics seminar, New Zealand
- Jul 2012** Department of Plant Sciences mathematical epidemiology seminar, Cambridge
- Jan 2011** Worms and Bugs lecture series, Cambridge

Outreach

- Jul 2020** Oxford University Covid Conversations public seminar and Q & A
- Apr 2020** Oxford University Mathematical Institute Public Lecture (online – over 70,000 views across different platforms)
- Apr 2020** Oxford University and Imperial College student question and answer panel about infectious disease outbreak modelling
- Feb 2020** Christ Church Horizons workshop, London
- Jan 2020** Christ Church Schools Lecture, Newcastle
- Nov 2019** "Being a researcher" question and answer panel, Oxford
- Feb 2019** Christ Church Horizons workshop, London

- Jun 2018** Oxford University undergraduate open day
Apr 2018 Christ Church mathematics lecture
Mar 2018 Further Maths – What Next? Oxford University outreach lecture

TEACHING

Lectures

- Aug 2019** *Lecturer in Mathematical Epidemiology, Institute of Statistical Mathematics, Japan*
 Wrote and delivered four epidemiological modelling lectures to policy-makers and epidemiologists
- Apr 2014 – Jun 2014** *Part IA Mathematical Biology Lecturer, University of Cambridge*
 Wrote and delivered seven matrix modelling lectures (to 200 students) and ran associated computer programming practicals. Received top feedback from students since the course began
- Feb 2014 – Mar 2015** *Lecturer in Mathematical Epidemiology, Wellcome Trust*
 Wrote and delivered three epidemiological modelling lectures in both years to policy-makers and epidemiologists, and ran two computer programming practicals per year

Tutorials/classes

- Oct 2017 – Present** *Applied Mathematics Tutor, Christ Church, University of Oxford*
 Delivering weekly tutorials on first and second year undergraduate applied mathematics and statistics courses. Other responsibilities involve conducting admissions interviews, setting/marking internal examinations and giving talks at undergraduate open days
- Oct 2014 – Sep 2017** *Stipendiary Lecturer in Applied Mathematics and Statistics, Lady Margaret Hall, University of Oxford*
 Delivered weekly tutorials on first and second year undergraduate applied mathematics and statistics courses including Mathematical Biology, Differential Equations, Calculus of Variations and Fluid Dynamics. Other responsibilities involved conducting admissions interviews, setting/marking internal examinations and pastoral care of 12 undergraduates per year
- Oct 2011 – Sep 2013** *Non-Stipendiary Lecturer in Mathematics, Worcester College, University of Oxford*
 Delivered weekly tutorials on first year undergraduate applied mathematics, probability and statistics courses
- Oct 2011 – Sep 2014** *Mathematical Biology Tutor, University of Cambridge*
 Conducted weekly supervisions in Part IA Mathematical Biology (ten students per year), and assisted the running of associated computer programming practicals

Research supervision

- Jan 2020 – Present** *DPhil supervisor, University of Oxford*
 Using mathematical modelling to optimise detection of invading plant pathogens (Francesca Lovell-Read, co-supervised with Professor Christl Donnelly)

- Oct 2018 – Present** – *DPhil supervisor, University of Oxford*
Using multi-scale models for infectious disease epidemic forecasting and control (William Hart, co-supervised with Professor Philip Maini)
- Oct 2018 – Present** – *DPhil co-supervisor, University of Oxford*
Mathematical modelling of the impact of air travel on the pandemic potential (Ben Singer, co-supervised with Professor Michael Bonsall)
- Oct 2018 – Present** – *DPhil co-supervisor, University of Oxford*
Platform diagnostics and their impact on infectious disease outbreak dynamics (Cassidy Nelson, co-supervised with Professor Michael Bonsall)
- Oct 2018 – Present** – *DPhil co-supervisor, University of Oxford*
Mathematical modelling for improving diagnoses of combined infectious disease/non-communicable disease cases (Rahil Sachak-Patwa, co-supervised with Professor Helen Byrne and in collaboration with an industry partner)
- Oct 2016 – Present** – *MMath dissertation supervisor, University of Oxford*
2017-18: Efficient analysis of epidemiological models in which the infectiousness of each infected host is time-dependent (William Hart)
2016-17: The role of host heterogeneity in HIV evolution (Lauren Enright)
- Jun 2016 – Present** – *Undergraduate summer project research supervisor, University of Oxford*
2019: Estimating the risk of flare-ups of infectious disease in new locations (Silvia Shen)
2018: The canary in the coal mine: using mathematics to improve surveillance for plant pathogens (Francesca Lovell-Read)
2018: Multi-scale models of infectious disease epidemics (Leonhard Hochfilzer)
2018: Optimal targeting of HIV-1 interventions towards at-risk populations in coastal Kenya (Thomas Critchley, co-supervised by Professor Helen Byrne)
2017: A user-friendly interface for inferring pathogen transmissibility (Jake Stockwin)
2016: Choosing appropriate mathematical models for planning control of invading pathogens (William Hart)
2016: Incorporating host heterogeneity into models of virus evolution (Lauren Enright)
- Oct 2015 – Present** – *Visiting student project research supervisor, University of Oxford*
2018: Modelling hidden infections in infectious disease epidemics (Liane Solomon)
2015: Modelling major epidemics of invading pathogens (Brandi Henri)
- Jun 2012 – Sep 2015** – *Part II/III Dissertation and Summer Project Co-supervisor, University of Cambridge*
2014-15: Optimising the timing of control of invading pathogens (Fiona Hampshire)
2013-14: Detection of invading pathogens in environments containing multiple host types (Oliver Watson)
2012: Modelling pathogen invasion in a heterogeneous landscape (Ben Price)

EDITORIAL POSITIONS

- Aug 2020 – Present** – *Editorial board member, Journal of Theoretical Biology*
Handle submitted papers, assign reviewers and make suggestions about editorial decisions
- Apr 2020 – Present** – *Section editor, coronavirus disease 2019 modelling review for UK government “Rapid Assistance in Modelling the Pandemic” initiative*
Acted as “population-scale epidemiological models” section editor (with Professor Mike Tildesley) in the rapid review group for the UK government (SPI-M, SAGE and Prime Minister’s Office) during the Covid-19 pandemic
- Jan 2019 – Present** – *Editorial board member, Theoretical Biology and Medical Modelling*
Handle submitted papers, assign reviewers and make suggestions about editorial decisions
- Jul 2017 – Nov 2019** – *Editor, Society for Mathematical Biology (SMB) Newsletter*
Wrote articles, conducted research interviews, edited and distributed the newsletter to readership of 2,500
- Jul 2018 – May 2019** – *Guest editor, Philosophical Transactions of the Royal Society B*
Lead editor of two linked theme issues on “Detection, forecasting and control of infectious disease epidemics: modelling outbreaks in human, animals and plants” with Dr Ellen Brooks-Pollock

POSITIONS OF RESPONSIBILITY

- May 2020** – *Organising committee member, Isaac Newton Institute workshop as part of programme on “Infectious Dynamics of Pandemics: Mathematical and statistical challenges in understanding the dynamics of infectious disease pandemics”*
Co-organised the virtual workshop on “Models for an exit strategy” (with Professor Valerie Isham, Professor Denis Mollison, Professor Deirdre Hollingsworth, Dr Olivier Restif)
- May 2020 – Present** – *Moderator, coronavirus disease 2019 forum for UK government “Rapid Assistance in Modelling the Pandemic” initiative*
Acted as moderator of the “Rapid Assistance in Modelling the Pandemic” online forum for mathematical modellers
- Apr 2020** – *Co-author of report for UK government Scientific Advisory Group for Emergencies*
Conducted research about transmissibility of SARS-CoV-2
- Mar 2020** – *Organising committee member, Interdisciplinary workshop on Mathematical and Empirical research in the Applied Life Sciences (iMEALS), South Korea*
Invited speakers and arranged programme
- Sep 2019** – *External examiner, University of Lincoln (New Zealand)*
Examined MSc thesis (Piyush Bhardwaj)

May 2017 – *Examiner, University of Oxford*

Present Examined DPhil viva (Susan Hawkins), two DPhil Transfer of Status vivas, one MSc dissertation and six MMath Part C dissertations

Feb 2013 – *Research grant and publication reviewer*

Present Reviewed research grants for funders including the Medical Research Council, Royal Society, London Mathematical Society, and publications for journals including Science, Philosophical Transactions of the Royal Society B, Scientific Reports, Epidemics, Journal of Theoretical Biology and PLoS Medicine

REFEREES

1. Dr Nik Cunniffe, Senior Lecturer in Mathematical Epidemiology, University of Cambridge
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2. Professor Philip Maini FRS FMedSci, Professor of Mathematical Biology and Director of Wolfson Centre for Mathematical Biology, University of Oxford
Email: philip.maini@maths.ox.ac.uk