

## Dr Jie Yang

Assistant Professor (Lecturer) in Applied Mathematics/Statistics



### Qualifications

2013	<b>PhD</b> in Systems Biology (University of Manchester, UK)
2008	<b>BSc (Hons)</b> in Mathematics (Imperial College, UK)

### Contact

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### Biography

Jie Yang joined the University of Nottingham Ningbo China (UNNC) in February 2017 as an Assistant Professor in Applied Mathematics/Statistics and is currently teaching Applied Mathematics and Mathematical Techniques for Electrical and Electronic Engineers 1. She previously taught Probabilistic and Numerical Techniques for Engineers and Computerised Mathematical Methods in Engineering. Jie is a core member of the Natural Resources and Environment research group and an associate member of the Advanced and Intelligent Manufacturing research group. Previously, she was a Research Fellow at the National University of Singapore investigating the spread of Zika and respiratory diseases, a Research Associate at Imperial College London studying helminth treatment strategies and a Research Fellow at the University of Exeter investigating biofuel production through the use of mathematical modelling.

### Expertise Summary

- Stochastic individual based modelling
- Ordinary differential equation (ODE) modelling and simulation
- Impact of climate and travel on the spread of Zika

- Biofuel production modelling
- Mammalian cancer cell cycle and metabolism modelling

## Teaching

Currently:

- Applied Mathematics (G11APP)
- Mathematical Techniques for Electrical and Electronic Engineers 1 (HG2ME1)

Previously:

- Probabilistic and Numerical Techniques for Engineers (HG2MPN)
- Computerised Mathematical Methods in Engineering (HG3MCE)

## Principal research interests

Applied mathematics for environmental health impact assessment

## Awards

- PI for NSFC Research Fund for International Young Scientists project entitled "An investigation into predictive modelling of the impact of air pollution on China's disease burden", UNNC, 2018-2019 (Project code: 21750110446). Amount funded: 400,000 RMB.
- Co-I for Faculty of Science and Engineering Inspiration Grant (FoSE) project entitled "Arc fault detection for DC power distribution systems of Marine applications", UNNC, 2017-2018. Amount funded: 50,000RMB.
- BBSRC and EPSRC Scholarship for a 4 year PhD in Systems Biology at the University of Manchester.
- Nuffield Foundation Bursary awarded for 8 week research internship in the Department of Epidemiology, Imperial College London, on the topic of "Mass Treatment for Seasonal Infectious Diseases".

## Recent Publications

Chen, L., Yang, X., Li, G., **Yang, J.**, Wen, C., Li, X., Snape, C. (2017) "Dynamic modelling of fluidisation in gas-solid bubbling fluidised beds". *Powder Technology*, 322, 461-470.

Shi, W., Li, G., **Yang, J.**, Zong, Y., Yang, X. (2017) "CFD-PBM modelling of gas-liquid two-phase flow in bubble column reactors with an improved breakup kernel accounting for bubble shape variations". *13<sup>th</sup> International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics* (HEFAT 2017, awarded "Outstanding Paper Award").

Dickens, B.L., **Yang, J. (joint first author)**, Cook, A.R., Carrasco, L.R. (2016) "Time to Empower Release of Insects Carrying a Dominant Lethal and *Wolbachia* Against Zika", *Open Forum Infectious Diseases*, 3(2), DOI: 10.1093/ofid/ofw103.

Anderson, R.M., Turner, H.C., Farrell, S.H., **Yang, J.**, Truscott, J.E. (2015) "What is required in terms of mass drug administration to interrupt the transmission of schistosome parasites in regions of endemic infection?", *Parasites and Vectors*, 8(553), DOI: 10.1186/s13071-015-1157-y.

**Yang, J.**, Truscott, J.E., Anderson, R.M. (2015) "How effective is school-based deworming on impacting the burden and prevalence of soil-transmitted helminths and schistosomes?", *The British Society For Parasitology 2015 Spring Meeting* (BSP 2015), Oral presentation for session B6: NTDs – Modelling.

**Yang, J.**, Howard, T.P., Love, J. (2013) "Modelling a Synthetic Microbial Alkane Production Pathway", SEB 2013, Poster No.: C5.13.

**Yang, J.**, Ortega, F., Snoep, J., Westerhoff, H., Mendes, P. (2012) "Analysis Of A Mammalian Cell Cycle And Metabolism Model", *The 12th International Conference On Systems Biology* (ICSB 2011), Poster No.: 146A.

**Yang, J.**, Taylor, C., Ortega, F., Snoep, J., Westerhoff, H., Mendes, P. (2011) "A Glucose-dependent Mammalian Cell-Cycle Model", *The 12th International Conference On Systems Biology* (ICSB 2011), Poster No.: PS 049.

**Yang, J.**, Taylor, C., Ortega, F., Snoep, J., Westerhoff, H., Mendes, P. (2010) "Parameter Dependence In A Mammalian Cell Cycle Model And Its Implications For The Restriction Point", *The 11<sup>th</sup> International Conference On Systems Biology* (ICSB 2010), Poster No.: P01.175.