

Programme

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Monday 12th August

[REGISTRATION](#)

13.00 - 14.00 Registration

14:00 - 14:10 Welcome: Jon Pitchford

[CALL FOR
ABSTRACTS](#)

14.10 - 15.10 Plenary: Professor Alasdair Houston, "Natural selection and irrational behaviour".

15.10 - 15.40 Tea/coffee

[CALL FOR
SYMPOSIA](#)

15.40 - 17.45 Parallel sessions

Session 1A: Contributed talks

Chair: TBA

[MAPS](#)

15:40 Simon Powers, "The co-evolution of social institutions, demography, and large-scale human cooperation"

[TRAVEL](#)

16:05 Anne Kandler, "A non-equilibrium neutral model for analysing cultural change"

16:30 Luke MacNally, "Cooperative niche construction facilitates zoonosis in pathogenic bacteria"

16:55 Simon Croft, "Birds of a feather flock together, but is that the best strategy for obstacle avoidance?"

17:20 Chris Cannings, "A dynamic network population model with strategic link formation governed by individual preferences"

Session 1B: Contributed talks

Chair: TBA

15:40 Rachel Taylor, "The impact of variations in seasonal forcing in the Fennoscandian vole system"

16:05 Pen Holland, "Of mice and mast: new temperature-based models improve predictability of pulsed resources and consumer population dynamics"

16:30 Farah Al Shorbaji, "First model of *Sphaerothecum destruens*, an emergent fungal disease responsible for the decline of European fish biodiversity"

16:55 Nicholas Stringer, "Modelling the growth of *Tradescantia flumentis* and the effects of biological control methods"

17:20 Rachel Lintott, "Dispersal, Disturbance and Disease Spread"

18.00 Reception: Treboom Brewery.

20.00 Ghost walk around York

Tuesday 13th August

09.30 - 10.30 Plenary: Dr Sonia Kefi, "Spatial structure and ecosystems' resilience: insights from drylands"

10.30 - 11.00 Tea/coffee and posters: quick-fire introductions

11.00 - 12.40 Parallel sessions

Session 2A: Contributed talks

Chair: TBA

11:00 Jason Roberts, "Mutualism models: a comparison via stability analysis"

11:25 Anje-Margriet Neutel, "Symmetry, asymmetry, complexity: Analysing the feedbacks in observed ecosystems"

11:50 Alex James, "Disentangling nestedness from models of complex ecosystems"

12:15 Steve Beckett, "Coevolved Nestedness and Modularity in model Phage-Bacteria Infection Networks"

Session 2B: Minisymposium - "Search Theory in Biology"

Chair: Tom Lidbetter

11:00 Mark Broom, "You can run or you can hide: games between searching predators and hidden prey"

11:25 Tom Lidbetter, "A search game model of the speed-acuity trade-off"

11:50 Yi-Hsiu Chen, "Optimal time allocation strategy for forager with incomplete information"

12:15 Jon Pitchford, "Are butterflies princesses or monsters? And why should you care if you are a fish?"

Session 2C: Contributed talks

Chair: TBA

11:00 Chris Watkins, "Sex as Gibbs sampling: a Markov Chain Monte Carlo model of evolution"

11:25 Andrew Higginson, "Competition for nest sites causes global variation in bumblebee declines"

11:50 Antonio Rodrigues, "Habitat quality and the evolution of dispersal and cooperation"

12:15 Alex Best, "Immune priming in invertebrate hosts: epidemiology and evolution"

12.40 Lunch

14.10 - 15.10 Plenary: Dr Drew Purves, "Modelling all life on Earth. Yes, really!"

15.10 - 15.40 Tea/coffee

15.40 - 17.45 Parallel sessions

Session 3A: Contributed talks

Chair: TBA

15:40 José Cuesta, "Neutral evolution and phenotypic entrapment"

16:05 Bartosz Szczesny, "When does cyclic dominance lead to stable spiral waves?"

16:30 Helen Kettle, "Modelling microbial diversity in the human colon"

16:55 Matthew Adamson, "When Can We Trust Our Model Predictions? Unearthing Structural Sensitivity in Biological Systems"

Session 3B: Contributed talks

Chair: TBA

15:40 Axel Rossberg, "Maximizing fisheries yields in the face of ecological uncertainty"

16:05 Celina Wong, "The missing link: zooplankton and their importance in modelling sustainable fisheries"

16:30 Simeon Hill, "Ecosystem-based fisheries management implies multiple objectives for complex and uncertain systems. Can control theory help?"

16:55 Garo Panikian, "Maximum likelihood and Bayesian methods to identify and quantify heteroscedasticity in fisheries"

Session 3C: Contributed talks

Chair: TBA

15:40 Omar Al Hammal, "How powerful are tests of neutral theory? Detecting density dependence in ecological communities"

16:05 Mickael Teixeira-Alves, "Simple rules for identifying positive indirect effects in classes of one-predator-two-prey models"

16:30 Stephen Baigent, "Life in the balance: the carrying simplex"

16:55 Jan Teichmann, "The application of temporal difference learning in optimal diet models"

17.20 - 17.45 Quick-fire poster plenary

17.45 - 19.00 Poster session and reception

Evening free

Wednesday 14th August

09.30 - 10.30 Plenary: Dr Suzanne Alonzo, "The Coevolutionary and Social Dynamics of Mating and Parental Care"

10.30 - 11.00 Tea/coffee

11.00 - 12.40 Parallel sessions

Session 4A: Contributed talks

Chair: TBA

11:00 David Ramsey, "Mate Choice Based on Multiple Traits"

11:25 Zena Hadjivasiliou, "Why are there two sexes?"

11:50 Rufus Johnstone, "Maternal effects as manipulation"

12:15 Morag MacPherson, "The population dynamical consequences of a maternal effect on resistance"

Session 4B: Minisymposium, "Food Webs and Biodiversity"

Chair: Axel Rossberg

11:00 Axel Rossberg, "Causal chains structuring food webs - a guided tour through *Food Webs and Biodiversity*"

11:25 Leopold Nagelkerke, "Trophic niche-space imaging, using resource and consumer traits"

11:50 Rudolf Rohr, "Phylogeny, trophic traits and food-web structure"

12:15 Tak Fung, "Biodiversity-ecosystem functioning relationships for large ecosystems with thousands of species: predictions and explanations using a dynamic food-web model"

Session 4C: Contributed talks

Chair: TBA

11:00 A. Jamie Wood, "The impact of social networks in Collective Motion"

11:25 Chris Watkins, "Dumb imitation of peers: accurately adapted individual behaviour from

collective innate information over the entire population"

11:50 James Marshall, " Cross-inhibition improves activity selection"

12:15 Zoe Cook, "Do ant colonies transport resources efficiently using simple behaviours?"

12.40 Lunch

14.10 - 15.10 Keynote speaker

15.10 - 15.40 Tea/coffee

15.40 - 17.45 Parallel sessions

Session 5A: Contributed talks

Chair: TBA

15:40 Christoforos Hadjichrysanthou, "Epidemic control analysis: designing optimal intervention strategies against epidemics propagated on contact networks"

16:05 Ace North, "Quantifying the dynamics of *Anopheles gambiae* populations from field data"

16:30 Samik Datta, "Modelling the spread of American Foulbrood in honey bees"

16:55 Linke Potgieter, "A mathematical model for the control of *Eldana saccharina* Walker"

17:20 TBA,"TBA"

Session 5B: Contributed talks

Chair: TBA

15:40 Sofia Piltz, "Prey Switching with a Linear Preference Trade-off"

16:05 Morufu Olayiwola, "On a Modified Variational Iteration Method for the Analytical Solution of Korteweg-de-Vries Equation"

16:30 Benja Fallenstein, "Exponential discounting can look just like hyperbolic discounting"

16:55 Martin Bees, "Dispersion of algae in laminar and turbulent flows"

17:20 Rachelle Binny, "Multi-scale modelling of

cell invasion"

Session 5C: Contributed talks

Chair: TBA

15:40 Juan Ramirez, "Can natural selection encode Bayesian priors?"

16:05 Marek Kwiatkowski, "Ontogenetic Growth Models and Life History Theory"

16:30 Daniel Jones, "Differing spatial models and the Baldwin effect"

16:55 Gereon Kaiping, "Modelling selection in evolutionary games: birth, death and the dangers of updating rule bias"

17:20 André Gruning, "Density-dependent integral projection models"

Conference dinner at York Railway Museum

Thursday 15th August

09.30 - 10.30 Plenary: Professor Richard Law, "Of trees and fish: population dynamics for organisms that grow".

10.30 - 11.00 Tea/coffee

11.00 - 12.40 Parallel sessions

Session 6A: Contributed talks

Chair: TBA

11:00 Andrew Hoyle, "Predicting the evolution of resistance in Atlantic salmon in response to a macro-parasite invasion"

11:25 Sarah Collings, "Estimating interaction strengths for whole food webs"

11:50 Gustav Delius, "Pattern formation in a size-structured spatial population model"

12:15 Chiara Benvenuto, "Population genetics consequences of fishing pressure in sequential hermaphrodites"

Session 6B: Contributed talks

Chair: TBA

11:00 Stuart Nattrass, "The effects of system capacity on disturbance-diversity relationships along a fecundity-growth trade-off"

11:25 Andy White, "The evolution of host-parasite range"

11:50 Ruairi Donnelley, "Parasite evolution when stressed hosts suffer increased virulence"

12:15 Tim Fawcett, "The evolution of play-fighting behaviour"

[End of conference](#)