

Evolution Evolving: Process, Mechanism and Theory

Preliminary Conference Program

Monday 1st April

18.00 - 19.45	Registration
18.00 - 19.45	Welcome reception

Tuesday 2nd April

Wolfson Hall Morning

08.50 - 09.00	Conference Welcome: Paul Brakefield
09.00 - 10.00	Plenary Talk: Renee Duckworth Dynamic stability and robustness of ecological systems: a missing link to evolutionary mechanisms? <i>University of Arizona, USA</i>
10.00 - 10.30	<i>Coffee Break</i>
10.30 - 12.10	General Session
10.30 - 10.50	Mycalesina in morphospace: how developmental bias shape evolutionary diversification in butterflies <i>Oskar Brattström, University of Cambridge, UK</i>
10.50 - 11.10	Fighting about frequency <i>Karen Kovaka, Virginia Tech, USA</i>
11.10 - 11.30	On leaders and followers: the evolution of phenotypic plasticity can lead the evolution of genetic evolvability more easily than vice versa <i>Miguel Brun-Usan, University of Southampton, UK</i>
11.30 - 11.50	Bird nests evolve flexibly in response to egg characteristics <i>Catherine Sheard, University of St Andrews, UK</i>
11.50 - 12.10	Adaptive evolution NOT driven by natural selection (?!?). On individual responses, inclusive inheritance, and fleshing out the second term of that famous Price equation. <i>Pim Edelaar, University Pablo de Olavide, Spain</i>
12.10 - 13.30	<i>Lunch</i>

Wolfson Hall Afternoon

13.30 - 14.10	Keynote Talk: Armin Moczek On the origins of novelty and diversity in development and evolution: case studies on horned beetles <i>Indiana University, USA</i>
14.10 - 17.20	Themed Session: Developmental Plasticity
14.10 - 14.30	DNA methylation lends plasticity to the coloration of an African cichlid <i>Sebastian Alvarado, Queens College CUNY, USA</i>
14.30 - 14.50	Unexplored maternal effect mediators, thyroid hormones, in an eco- evolutionary context <i>Suvi Ruuskanen, University of Turku, Finland</i>
14.50 - 15.10	Phenotypic plasticity facilitates colonization of savannas in <i>Mycalesina</i> butterflies <i>Sridhar Halali, University of Cambridge, UK</i>
15.10 - 15.40	<i>Coffee Break</i>
15.40 - 16.00	Does thermal plasticity align with local adaptation? – An interspecific comparison of wing shape and size in sepsid flies <i>Patrick Rohner, University of Zurich, Switzerland</i>
16.00 - 16.20	Macroevolutionary dynamics of phenological plasticity <i>Stephen De Lisle, Lund University, Sweden</i>
16.20 - 16.40	Developmental regulation and evolution of nutrition-responsive growth: transcriptomic underpinnings of plasticity in horned beetles <i>Sofia Casasa, Indiana University, USA</i>
16.40 - 17.00	Involvement of maternal yolk thyroid hormones in the evolution of life history traits in birds: a comparative analysis <i>Bin-Yan Hsu, University of Turku, Finland</i>
17.00 - 17.20	Phenotypic divergence across spadefoot toad species mirrors within- species consequences and mechanisms of developmental plasticity <i>Christoph Liedtke, Donana Biological Station, CSIC, Spain</i>
17.20 - 19.00	<i>Poster Session</i>

Fellow's Dining Room Afternoon

13.30 - 14.10	Keynote Talk: Angela Potochnik Causal patterns and how our theories change <i>University of Cincinnati, USA</i>
14.10 - 17.20	Themed Session: Philosophy of Biology
14.10 - 14.30	What the history of biology tells us about the Extended Evolutionary Synthesis <i>Jan Baedke, Ruhr University Bochum, Germany</i> <i>Daniel J Nicholson, Konrad Lorenz Institute for Evolution and Cognition Research, Austria</i>
14.30 - 14.50	Towards a novel unifying theory of the genotype concept <i>David Ricote Hernández, Centro Andaluz de Biología del Desarrollo, CSIC-Universidad Pablo de Olavide-Junta de Andalucía, Spain</i>
14.50 - 15.10	Rethinking cybernetics in contemporary theoretical biology <i>Flavia Fabris, Egenis, the Centre for the Study of Life Sciences, University of Exeter, UK</i>
15.10 - 15.40	<i>Coffee Break</i>
15.40 - 16.00	The Extended Evolutionary Synthesis debate: some epistemological and sociological dimensions <i>Alejandro Fábregas-Tejeda and Francisco Vergara-Silva, Instituto de Biología, Universidad Nacional Autónoma de México, Mexico</i>
16.00 - 16.20	Beyond standard views of reproduction: pregnant females as individuals and their role in evolution <i>Laura Nuño de la Rosa and Arantza Etxeberria, Complutense University of Madrid, Spain</i>
16.20 - 16.40	Evolution of multicellularity: Cheating done right <i>Walter Veit, University of Bristol, UK</i>
16.40 - 17.00	The explanatory robustness of developmental types: a propensity view <i>Cristina Villegas, Complutense University of Madrid, Spain</i>
17.00 - 17.20	The cultural evolution of cultural evolution <i>Jonathan Birch, London School of Economics and Political Science, UK</i>
17.20 - 19.00	<i>Poster Session</i>

Wednesday 3rd April

Wolfson Hall Morning

09.00 - 10.00	Plenary Talk: Alan Love Structuring knowledge in evolutionary biology <i>University of Minnesota, USA</i>
10.00 - 10.30	<i>Coffee Break</i>
10.30 - 12.10	General Session
10.30 - 10.50	Evolution by natural induction <i>Richard Watson, University of Southampton, UK</i>
10.50 - 11.10	Generalized pathways to specific outcomes: stress links maternal environment and adaptive offspring trait variation <i>Ahva Potticary, University of Arizona, USA</i>
11.10 - 11.30	Evolution of migratory behavior by barnacle geese: the roles of experience, memory and social learning <i>Thomas Oudman, NIOZ Netherlands Institute for Sea Research, The Netherlands, Visiting scholar at University of St Andrews, UK</i>
11.30 - 11.50	Theory-based ecology and niche construction <i>Liz Pásztor, Biological Institute, Eötvös Loránd University, Hungary</i>
11.50 - 12.10	The Hot Spring Hypothesis for the origin of life: implications for niche construction theory in the first major transition in evolution from non-life to Life <i>Bruce Damer, Biota Institute/UC Santa Cruz, USA</i>
12.10 - 13.30	<i>Lunch</i>

Wolfson Hall Afternoon

13.30 - 14.10	Keynote Talk: Jukka Jernvall To walk or not walk the line of a developmental bias <i>University of Helsinki, Finland</i>
14.10 - 16.00	Themed Session: Developmental Bias
14.10 - 14.30	Developmental bias and morphological convergence in Anolis lizards <i>Nathalie Feiner, Lund University, Sweden</i>
14.30 - 14.50	Measuring developmental bias: quantitative genetics meets developmental biology <i>Lisandro Milocco, University of Helsinki, Finland</i>
14.50 - 15.10	The evolutionary potential of environmentally induced phenotypes <i>Reinder Radersma, Lund University, Sweden</i>
15.10 - 15.40	<i>Coffee Break</i>
15.40 - 16.00	Developmental interactions established during speciation leave a lasting trace in descendent populations <i>Laura Mears, University of Southampton, UK</i>
16.00 - 17.20	Themed Session: Evolutionary Innovation
16.00 - 16.20	What kind of evolutionary novelty (if any) could be language? <i>Salvatore Ivan Amato and Giuliana Pulvirenti, University of Messina, Italy</i>
16.20 - 16.40	It's a horn, a wing, a helmet: the role of wing serial homologs in insect innovations <i>Yonggang Hu, Indiana University, USA</i>
16.40 - 17.00	Beyond Darwin: how every individual adapts to its internal perturbations? <i>Yoav Soen, Weizmann Institute of Science, Israel</i>
17.00 - 17.20	How the beetle head got its horns: integrating a novel trait into a conserved trait complex <i>David M Linz, Indiana University, USA</i>
17.20 - 19.00	<i>Poster Session</i>

Fellow's Dining Room Afternoon

13.30 - 14.10	Keynote Talk: Laurel Fogarty The inheritance and heritability of niche constructed traits <i>Max Planck Institute for Evolutionary Anthropology, Germany</i>
14.10 - 16.20	Themed Session: Niche Construction
14.10 - 14.30	Niche construction affects the consistency and strength of natural selection <i>Andrew Clark, University of St Andrews, UK</i>
14.30 - 14.50	Linking coral morphological traits and reef fish community structure <i>Luisa Fontoura, Macquarie University, Australia</i>
14.50 - 15.10	Microbial community structure and function driven by infaunal niche construction in intertidal sediments <i>Adam Wyness, University of St Andrews, UK</i>
15.10 - 15.40	<i>Coffee Break</i>
15.40 - 16.00	Keeping close neighbours, corals are spatially clustered within and across species <i>Maria Dornelas, University of St Andrews, UK</i>
16.00 - 16.20	Holed-up: nesting in a cavity as an evolutionary driver of parental care in fishes and birds <i>Karina Vanadzina, University of St Andrews, UK</i>
16.20 - 17.20	Themed Session: Cultural Evolution
16.20 - 16.40	Trait specialisation, innovation and the evolution of culture in changing environments <i>Dominik Deffner, Max Planck Institute for Evolutionary Anthropology, Germany</i>
16.40 - 17.00	A New Caledonian crow's-eye-view on how to develop probing intelligence: the evolution of tool-use and tool-making as embodied, distributed and socially situated perception action processes <i>Joanna Fairlie, on behalf of Max Planck Institute for the Science of Human History, Germany</i>
17.00 - 17.20	Generalized Darwinism revisited: how a new synthesis changes our view on cultural evolution <i>Karim Baraghith, Duesseldorf Center for Logic and Philosophy of Science, Heinrich-Heine University, Germany</i>
17.20 - 19.00	<i>Poster Session</i>

Thursday 4th April

Wolfson Hall Morning

09.00 - 10.00	Plenary Talk: Alex Badyaev Control theory in evolution <i>University of Arizona, USA</i>
10.00 - 10.30	<i>Coffee Break</i>
10.30 - 12.10	General Session
10.30 - 10.50	Stress-induced mutagenesis systems and the adaptive immunity <i>Bartłomiej Swiatczak, University of Science and Technology of China, China</i>
10.50 - 11.10	Phenotypic integration as both developmental bias and developmental facilitation of evolutionary diversification: empirical examples from teeth, toes, and torsos <i>Kathryn Kavanagh, University of Massachusetts Dartmouth, USA</i>
11.10 - 11.30	Can plasticity create irreversible constraints? <i>Alfredo Rago, University of Southampton, UK</i>
11.30 - 11.50	Cultural evolution, revolution and transmission of humpback whale song <i>Ellen C Garland, University of St Andrews, UK</i>
11.50 - 12.10	Niche construction: resolving the process debate <i>Tim Lewens, University of Cambridge, UK</i>
12.10 - 13.30	<i>Lunch</i>

Wolfson Hall Afternoon

13.30 - 14.10	Keynote Talk: Joanna Masel The roles of development and population genetics in shaping adaptive evolution <i>University of Arizona, USA</i>
14.10 - 17.20	Themed Session: Evolvability
14.10 - 14.30	Comprehensive transcriptomics tracks changes in gene expression and coding sequences during C4 evolution <i>Lamiaa Munshi, The University of Sheffield, UK</i>
14.30 - 14.50	Computational complexity is an ultimate constraint on evolution <i>Artem Kaznatcheev, University of Oxford, UK</i>
14.50 - 15.10	Population-level variation in sperm-mediated paternal effects in threespined sticklebacks <i>Jennifer Hellmann, University of Illinois Urbana-Champaign, USA</i>
15.10 - 15.40	<i>Coffee Break</i>
15.40 - 16.00	The effect of parental care on population evolvability <i>Sonia Pascoal, University of Cambridge, UK</i>
16.00 - 16.20	The thrifty watchmaker <i>Michael Lachmann, Santa Fe Institute, USA</i>
16.20 - 16.40	Variable phenotypic plasticity and its consequences for evolutionary potential <i>Franziska Brunner, University of Liverpool, UK</i>
16.40 - 17.00	Comparative genomics of convergent evolution in the emergence of complex traits <i>Claudio L Flores Martinez, University of Hamburg, Germany</i>
17.00 - 17.20	Epigenetic potential in native and introduced populations of house sparrows (<i>Passer domesticus</i>) <i>Haley Hanson, University of South Florida, USA</i>
17.20 - 18.30	<i>Free time</i>
18.30 - 19.30	Plenary Talk: Jessica Riskin The restless machinery of life <i>Stanford University, USA</i>
19.45 - 23.00	<i>Conference Dinner</i>

Fellow's Dining Room Afternoon

13.30 - 14.10	Keynote Talk: Sean Rice How to make general theories of evolution applicable to complex special cases <i>Texas Tech University, USA</i>
14.10 - 16.00	Themed Session: Mathematical Models
14.10 - 14.30	Why does natural selection favour the transgenerational inheritance of social adversity? <i>Bram Kuijper, University of Exeter, UK</i>
14.30 - 14.50	Trait mean-variance relationships impact speed of adaptation <i>Rebecca Hoyle, University of Southampton, UK</i>
14.50 - 15.10	The influence of multi-level demographic and ecological feedbacks in the evolution of cooperation <i>Antonio MM Rodrigues, University of Cambridge, UK</i>
15.10 - 15.40	<i>Coffee Break</i>
15.40 - 16.00	The evolution of teaching and anti-teaching <i>James Allen, University of Cambridge, UK</i>
16.00 - 17.20	Themed Session: Inclusive Inheritance
16.00 - 16.20	Evolution of small RNA production under fluctuating environmental conditions <i>Willian TAF Silva, Uppsala University, Sweden</i>
16.20 - 16.40	Inheritance of acquired traits - Implications for evolution? <i>Sophie Juliane Veigl, University of Vienna, Austria</i>
16.40 - 17.00	Egg development plasticity and the transmission of maternal effects in <i>Daphnia</i> <i>Stew Plaistow, University of Liverpool, UK</i>
17.00 - 17.20	Environmental heterogeneity mediates the evolution of trans-generational effects on fitness <i>Martin Lind, Uppsala University, Sweden</i>