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Tue, 09 Dec 16:00	MGSE Lecture Series 'The Growth of the Evolutionary Thought' Diddahally Govindaraju (Comparative Zoology, Harvard University & Aging Research, Albert Einstein College of Medicine) »Levels and units of selection in evolution and precision medicine« Lecture Hall HHü, Institute for Evolution and Biodiversity, University of Münster » More details
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Fri, 09 Jan 11:15	NC³ Seminar Series Holger Schielzeth (Population Ecology, University of Jena) »Molecular basis of the green-brown polymorphism in grasshoppers« Department of Animal Behaviour, Bielefeld University » More details
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Latest News

Focusing on the individual: how diversity advances research

18 November 2025

What makes beings individual, and how do they influence their environment? The Focus Area 'InChangE – Individualisation in Changing Environments' at Bielefeld University is dedicated to examining these questions from an interdisciplinary perspective. Researchers in biology, philosophy, psychology, sociology, and other disciplines are integrating data and theory to understand the causes and consequences of individual differences. Their goal is to develop a new science of individualisation—one that encompasses both humans and animals.

» Focus Area 'InChangE – Individualisation in Changing Environments'

[»] Article by Bielefeld University

Diddahally R. Govindaraju joins JICE as Visiting Fellow

7 November 2025

Dr Diddahally R. Govindaraju is a Visiting Professor at the Institute for Aging at the Albert Einstein College of Medicine, and a Research Associate in the Department of Organismic and Evolutionary Biology at Harvard University, where he teaches 'Evolutionary Processes in Epidemiology and Precision Medicine'. The course bridges evolutionary genetics, epidemiology and key elements of precision medicine.

Dr Govindaraju's research spans evolutionary genetics of plants and humans, with a sustained focus on understanding how evolutionary principles illuminate the origins and diversity of health and disease. During his JICE Visiting Fellowship, he will explore niche construction in evolution and human health, while developing a framework for individual-level thinking in precision medicine. His work integrates evolutionary principles with genotype—phenotype mapping at the individual level to illustrate how genetic architectures are modulated in a context-dependent manner within populations. This approach aims to advance the predictive, preventive and therapeutic aspects of precision medicine.

» Talk by Diddahally R. Govindaraju on 9 December 2025

Eric Grunenberg is new JICE ECR Fellow

6 November 2025

The research agenda of psychologist Eric Grunenberg research agenda involves integrating theoretical advances from social and personality psychology with novel machine learning approaches to predict, explain and implement changes in social decision-making. During his ECR Fellowship, he will conclude a research project investigating behavioural factors that influence how humans choose their romantic partners in large-scale speed dating scenarios. The study combines distal self-report data and observable behaviour to clarify when unique partner choices become predictable. Beyond this, it will provide a methodological showcase of a novel computational modelling approach for uncovering cues that make certain individuals 'click' with each other. By identifying the behaviours and conditions under which individual partner choices arise, the findings will advance our understanding of how and why individuals select their social relationships.

'Under stress, the buffer system is overloaded'

5 November 2025

Since the discoveries made by the British naturalist Charles Darwin, one thing is clear: inherited differences between individuals are a decisive condition for evolutionary adaptation in organisms. Via the formation of proteins, they lead to different characteristics. In evolutionary biology these visible differences are called 'phenotypes'. What Darwin could not know, however, is that there are also 'hidden' (cryptic) genetic variations. A team led by Dr Rascha Sayed and Prof Dr Joachim Kurtz from the Institute of Evolution and Biodiversity at the University of Münster has now found evidence of such a variation and has identified its genetic basis. In an interview with the university newspaper *wissen|leben*, JICE member Joachim Kurtz provides details of this mechanism.

- » Publication in Nature Communications
- $\underline{\text{$\tt w$ Interview in the newspaper $\it wissen} | leben \ {\tt of the University of M\"unster}}$

Call for papers in Personality Science

20 October 2025

A call for papers is currently open for the interdisciplinary Special Issue 'Towards an integration of personality research across psychology and biology' in the journal *Personality Science*. Guest-edited by JICE members Mitja Back, Barbara Caspers, Melanie Dammhahn and Niclas Kuper, the Special Issue will feature papers making important theoretical, methodological, empirical and applied contributions – while implementing an interdisciplinary perspective that bridges personality psychology and animal personality research. The deadline for proposals is 30 November 2025.

- » Call for papers
- » Scientific journal Personality Science

JICE welcomes ECR Fellow Maria Luigia Vommaro

16 October 2025

During her ECR Fellowship, ecotoxicologist Dr Maria Luigia Vommaro will conduct a research project entitled 'Individualisation in Ecotoxicology', which explores how intrinsic individual traits mediate ecological responses to environmental stressors such as pesticides and heatwaves. She will use the two established invertebrate models *Tenebrio molitor* and *Tribolium castaneum* to gain insights into the mechanisms determining insect resilience to such environmental conditions at an individual level. By integrating biological, toxicological, statistical, and ecological perspectives, she seeks to achieve three main objectives: (1) describing individual differences in stress responses, (2) explaining how these differences arise through physiological and immunological mechanisms and (3) predicting variation in ecological resilience using trait-based modeling.

New approach to studying individual differences in social behaviour

14 October 2025

Why do individuals – both humans and animals – differ so greatly in how they interact with others? How do social experiences shape these differences? And what consequences do variations in social behaviour have for individuals and communities? An interdisciplinary research team of JICE members led by psychologists and Dr Niclas Kuper and Prof Dr Mitja Back from the University of Münster has presented a new framework in the journal *Nature Human Behaviour* for systematically studying the diversity of individual social behaviour. The so-called 'Linked-Lives approach' integrates insights from psychology, biology, sociology, economics, and philosophy. Its goal is to provide a comprehensive understanding of individual differences in social behaviour – across disciplinary boundaries, species and contexts.

- » Publication in Nature Human Behaviour
- » Press release by the University of Münster

Personality research across species boundaries

1 October 2025

The new Topical Programme at the University of Münster entitled 'Animal Personality Meets Personality Psychology' got going at the beginning of October with a kick-off workshop. The aim of the project is to build bridges not only between these two fields of research – animal personality and personality psychology – but also to related disciplines. In addition to working groups from the fields of Biology and Psychology, researchers are also involved from the Faculty of Medicine and the Departments of Psychology, Sports Science and History/Philosophy. The two spokespersons for the project, Prof Dr Melanie Dammhahn (Biology) and Prof Dr Mitja Back (Psychology), provide insights into the research being planned within the JICE.

» Article in the newspaper wissen|leben of the University of Münster

» More details about the initiative

Jinyu Qiu begins JICE ECR Fellowship

4 September 2025

The research of behavioural ecologist Dr Jingyu Qiu focuses on individual differences in life histories as well as behavioural and physiological traits and how these interact with the environment. For her doctorate, she studied wild Karoo bush rats (*Otomys unisulcatus*), revealing that ecological constraints during early life stages can lead to divergence in life histories and have long-term consequences in adulthood. Building on this foundation, she will develop a research project during her ECR Fellowship to investigate how individuals cope with human-induced information pressure in the context of urbanisation. This will address three key questions: (1) whether personality predicts individual performance under information pressure, (2) how personality interacts with different types of information pressure and (3) how urbanisation influences information-processing ability at the population level in the wild.

Interdisciplinary research on individual differences

28 August 2025

Funded by the Ministry of Culture and Science (MKW) of the State of NRW, the collaborative research association 'Individualisation in Changing Environments' (InChangE) brings together natural sciences, social sciences and humanities to explore the complex interactions between individuals and their environment. In an interview, the directors Prof Dr Barbara Caspers (Bielefeld University) and Prof Dr Jürgen Gadau (University of Münster) talk about their experiences and findings within InChangE.

» Interview on the MKW website Forschungsförderung NRW [de]

Your morning coffee really does make you happier

15 August 2025

People who regularly consume caffeine are usually in a better mood after a cup of coffee or another caffeinated drink—an effect that is much more pronounced in the morning than later in the day. This finding comes from a new study by a team including JICE member Prof Dr Sakari Lemola and other researchers at Bielefeld University and the University of Warwick, published in the journal *Scientific Reports*. Participants reported feeling significantly happier and more enthusiastic on those mornings compared with other days at the same hour when they had not yet had coffee.

- » Press release by Bielefeld University
- » Publication in Scientific Reports

Deleterious genes reduce mating success in black grouse

11 August 2025

A research team led by biologist Rebecca Chen from Bielefeld University has investigated how certain genetic changes influence the reproductive success of male black grouse. The key finding: it is not outwardly visible characteristics such as colourful plumage that determine mating success, but behaviour. Males with a high number of deleterious mutations were less likely to be found at mating grounds (leks), thus missing crucial opportunities for reproduction. The study has now been published in *Nature Ecology & Evolution*.

- » Press release by Bielefeld University [de]
- » Publication in Nature Ecology & Evolution

Innate immune memory influences the evolution of pathogens

20 July 2025

Like all vertebrates, humans have two types of immune memory: the memory of the acquired (adaptive) immune system, which is highly specific to certain pathogens and long-lasting and makes vaccinations possible, and that of the innate immune system – a 'trained immunity' – which reacts quickly but less specifically. Invertebrates such as insects only have the innate immune system, but they also possess a form of immunisation through contact with pathogens ('immune priming'). Until now, there has been no study on how the confrontation of pathogens with hosts that have such an activated innate immune system affects the evolution of pathogens, and specifically their 'dangerousness', or virulence. A research team at the University of Münster led by evolutionary biologist and JICE member Prof Dr Joachim Kurtz has now investigated this for the first time through experimental evolution of an insect pathogen (*Bacillus thuringiensis tenebrionis*) in red flour beetles. One result: after some time of evolution, the pathogen's virulence differed significantly between the different bacterial lines. This greater diversity could accelerate the adaptation of pathogens to their hosts.

- » Press release by the University of Münster
- <u>» Publication in *PLOS Pathogens*</u>

Smartphone app 'WAU' collects data for dog study

18 July 2025

Dog owners who would like to support a research project on animal welfare by JICE members from the Department of Behavioural Biology at the University of Münster can do so via smartphone – with the 'WAU app'. This free app allows interested people to record the emotions and behaviour of their dogs. No special knowledge is required. The WAU app can be downloaded from the Google Play Store or the Apple App Store. WAU is a citizen science project at the university on the topic of 'Emotions, laterality and personality in dogs'.

- » Press release by the University of Münster [de]
- » Website of the WAU app
- » Video about the Citizen Science project 'Laterality, emotions & personality in dogs' on YouTube [de]

New JICE ECR Fellow: Kai-Philipp Gladow

9 July 2025

The primary research interest of behavioural ecologist Dr Kai-Philipp Gladow lies in understanding how species interactions promote or hinder coexistence. For his doctorate, he examined how various birds of prey, namely eagle owls, goshawks, common buzzards and red kites, influence each other's behaviour and breeding performance through intraguild predation, i.e. the killing of individuals belonging to a competing species with similar ecological niches. During his ECR Fellowship, he will expand upon this work by incorporating individual-level behavioural variation into models of intraguild predator systems – in this way, he will integrate theoretical approaches and advance ecological models of species coexistence. This will address a critical gap in classical coexistence theory, which often overlooks individualisation as a key driver of interaction dynamics. The work has direct implications for biodiversity conservation, helping to predict how ecological communities might respond to environmental change and increasing anthropogenic pressures.

New Topical Programme strengthens Profile Area 'Individualisation'

27 May 2025

The Rectorate of the University of Münster has approved the joint research initiative 'Animal Personality Meets Personality Psychology' for funding within the University's strategic Topical Programmes line. The project is led by JICE members Prof Dr Mitja Back (Personality Psychology) and Prof Dr Melanie Dammhahn (Behavioural Biology).

The project aims to establish a novel interdisciplinary research bridge between animal personality research and psychological personality science. Although both fields have developed in parallel—conceptually and methodologically—there has been little systematic exchange between them. This initiative addresses precisely that gap, creating a research forum that fosters dialogue between biology, psychology and related disciplines.

- » Press release by the Future Lab of the University of Münster
- » Topical Programmes at the University of Münster
- » Profile Area 'Individualisation' of the University of Münster

Reshma R started as JICE ECR Fellow

14 May 2025

The research of evolutionary biologist Dr Reshma R focuses on the causes and consequences of individual variation in phenotypic traits and how these contribute to the adaptation of populations to rapid environmental changes. As part of her doctorate at the University of Münster, she investigated the role of evolutionary capacitance in facilitating faster adaptation by enabling populations to store sufficient variation in the form of cryptic genetic variation and release it during stressful conditions. As a part of this, she extensively documented individual variation in circadian activity rhythms in red flour beetles (*Tribolium castaneum*). During her ECR Fellowship, she will examine individual differences in potential trade-offs between activity rhythms and life-history traits in beetles, and prepare a proposal for an individual research grant.

New Publications

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Brandler T, Chakarov N (2024): Mitochondrial and apicoplast genome copy abundances of haemosporidian parasites are explained by host species and parasitic lineage. *Frontiers in Ecology and Evolution* 12, 1305418. https://doi.org/10.3389/fevo.2024.1305418

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Frankenberg SR, Lucas S, Feigin CY, Doronina L, Steffen R, ..., Pask AJ (2025): Unearthing the secrets of Australia's most enigmatic and cryptic mammal, the marsupial mole. *Science Advances* 11, eado4140.

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About JICE

The Joint Institute for Individualisation in a Changing Environment (JICE) is an interdisciplinary research centre founded by Bielefeld University and the University of Münster. It unites researchers investigating individualisation processes in changing environments and promotes interdisciplinary research bridging natural sciences, social sciences and humanities with the aim to develop a comprehensive understanding across disciplines and species.

The JICE builds on the <u>Transregional Collaborative Research Centre NC³ (CRC/TRR 212)</u>, in which biologists and philosophers have been working on a new synthesis of individualisation since 2018. In addition, the <u>collaborative research association InChangE</u>, funded by the state of North Rhine-Westphalia as part of the programme "Profilbildung 2020", has been based at the JICE – investigating causes, mechanisms and consequences of individualisation by linking various disciplines such as biology, philosophy, sociology, economics, psychology, geoinformatics, psychiatry and health sciences.













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jice.info



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