iDiv conference 2019 - Call for abstracts

26.04.2019

Date: 29 and 30 August 2019
Venue: Leipziger KUBUS - Helmholtz Centre for Environmental Research – UFZ

Dear iDiv scientists,

We are pleased to invite you to the **fifth iDiv conference**, which will be held on **29 and 30 August 2019 in Leipzig.**

The iDiv conference is the most important annual iDiv event that brings experienced and young iDiv scientists together. The aim is to provide an **interactive forum for scientific exchange** and an attractive platform for establishing new contacts and collaborations within the iDiv consortium. This year, we will structure the contributions to the conference according to the new research areas defined for the DFG renewal proposal. This will facilitate discussions within and across these research areas, and give momentum to the proposal writing process. For this reason, there will be **dedicated Topic Sessions** this year.

Each Topic Session will start with a keynote address and feature a mix of presentation formats (standard talks, speed talks, flash presentations of posters and demonstrations). On the second day of the conference, we will also have time for discussions and synthesis (workshops, marketplace session). For young researchers, we offer two **sessions on career development** in cooperation with yDiv. Last but not least, we are looking forward to two exciting **keynote lectures**, one by **Marie Stenseke** (University of Gothenburg) and one by a speaker invited by yDiv PhD-students (to be announced shortly).

So come and register - registration and abstract submission is only possible online, please click here.

Important dates:

Registration open:	26 April
Abstract submission deadline:	07 June
Confirmation letters:	17 July
Registration closed:	12 August

In case of any questions, please contact the Conference Organizing Committee at idiv-conference@idiv.de or Rebecca Thier-Lange (phone: +49 341/9733103).

We hope to welcome you all in August at the conference!

Yours, the iDiv Conference Organizing Committee
Nico Eisenhauer (chair), Nicole van Dam (co-chair), Léa Beaumelle, Anna Burnett, Simone Cesarz, Volker Grimm, Svenja Haenzel, Paul Lyam, Susanne Marr, Julia Siebert, Rebecca Thier-Lange, Stefan Trogisch, Hanna Weise, Alexandra Werner

Topic Sessions

When you register as a presenter, we ask you to pick a Topic Session for your presentation into which your contribution fits best. These sessions are:

I. Biodiversity Change (in the Anthropocene)
II. Molecular Biodiversity and Evolution
III. Biodiversity Dynamics and Complexity
IV. Biodiversity and Society
V. Biodiversity and the Functioning of Ecosystems
VI. Data - New Tools, New Codes, New Prospects

Please also refer to the summaries and guiding questions below.

All submissions will undergo a review for the Topic Sessions. Please be aware that the reviewers may suggest a different format and/or session for your contribution.

Presentation Formats

All Topic Sessions feature the presentation formats listed in the table below. Doctoral researchers and flexpool scientists are particularly encouraged to give speed talks. In addition, you can submit proposals for 60 min workshops (2nd day only). Please note that due to limited space we may not be able to accept all proposed workshops. In addition, there will be time for in-depth discussion at a marketplace session (no registration required, 2nd day only).

Sequence in session	**Presentation format**	**Time per presentation format (min)** presentation + discussion	**Quantity**	**Total time (min)** per format
1	**Keynote address:** here, the session chairs invite a presenter to give an inspiring kick-off talk for the session	15 + 5	1	20
2	**Standard talk:** traditional conference talk	7 + 3	4	40
3	***Take a breath:*** *a short break after the session keynote and all four standard talks e.g. to continue bilateral discussions*	*5 min break*	*1*	*5*
4	**Speed talk:** Short and concise presentation of a topic. After a set of four speed talks, there will be 5 min for discussion.	5	4	25
5	**Poster & demonstration - flash oral presentation:** Each poster and demonstration is introduced in 1 minute w or w/o slides	1	10	10
			Total duration:	100

Session 1: Biodiversity Change (in the Anthropocene)

Summary: This session aims to promote the integration of biodiversity theory, applied conservation science, and biodiversity monitoring to answer the overarching questions: How are biological communities changing; at which spatial and temporal scales; and to what extent do different anthropogenic drivers contribute to this change?

Guiding questions:

- What are biodiversity patterns across spatial and temporal scales and realms (marine, freshwater, terrestrial)?
- What are drivers of biodiversity changes (including losses) – what is the role of anthropogenic drivers (including land use)?
- What are relationships between traits and patterns?
- How are patterns influenced by trait evolution?

Challenges:

- Role of scales for observed patterns
- How can theory contribute to quantification?
- How to link changes to the drivers of change
- Bridging (temporal and spatial) scales and realms

Session 2: Molecular Biodiversity and Evolution

Summary: This session is about understanding the links between molecular biodiversity (chemical diversity, the (holo)genome, regulators) and the mechanisms and elements of evolution (adaption, individual fitness, speciation).

Guiding questions:

- How do molecular mechanisms of evolutionary change drive (local) adaptation and speciation?
- What are the links between chemical diversity, species interactions and community complexity?
- What is the role of the hologenome (the genome of all organisms associated to/with an individual organism) for fitness and adaptation?
- Which genes/genetic pathways are involved in the evolution of specific species? What is the role of transcriptional regulators?

Challenges:

- Increasing the spatial and temporal resolution of data on molecular biodiversity (e.g. through high throughput measures)
- Scaling up from molecular interactions to community and ecosystem levels
- Linking molecular biodiversity to health (e.g. pollen diversity, discovery of new medicine)
- Application of existing methods (including bioinformatics pipelines) to non-model organisms
- Moving from meta-barcoding to whole genome sequencing/functional genomics (of soil organisms)
- Quantifying the evolutionary potential of species

Session 3: Biodiversity Dynamics and Complexity

Summary: This session aims to uncover the processes that underlay the emergence of biodiversity. This includes analyzing the dynamics of networks (trophic and other), of functional trait compositions, processes like demography, movement or interactions, and other features of complex biological systems.

Guiding questions:

- What are the processes leading to biodiversity patterns across space and time?
- What is the interplay between species interactions and biodiversity?
- Are there tipping points in complex natural ecosystems?
- Which mechanisms generate and facilitate diversity as an emergent property and (how) are they nested? What is the role of traits?
- Which mechanisms stabilize i) ecological networks, ii) complex communities?
- How do alien species coexist with native species in novel ecosystems?

Challenges:

- Using functional traits to predict biodiversity dynamics and patterns
- Integration of theoretical frameworks with [individual based] models
- Integration of ecological and evolutionary processes in a community assembly framework

Session 4: Biodiversity and Society

Summary: This session explores a wide range of linkages between biodiversity and society, such as defining positive futures for biodiversity and ecosystem service provisioning, improving conservation using novel approaches (e.g. rewilding). Further topics are the analysis feedbacks between human activity and biodiversity, of elusive relationships like telecoupling or of the effects of biodiversity on health and well-being.

Guiding questions:

- What are feedback mechanisms between biodiversity and socio-economic systems?
- How to account and regulate remote responsibility on biodiversity and ecosystem service change?
- How to engage society in biodiversity and ecosystem services monitoring and assessments and to understand relational values?
- What are possible positive futures for biodiversity and ecosystem services and pathways to them in the post-2020 framework?
- How to improve biodiversity conservation, e.g. through novel approaches such as rewilding?
- How does biodiversity affect human health and well-being (including allergies remedies)?

Session 5: Biodiversity and the Functioning of Ecosystems

Summary: The session on biodiversity and the functioning of ecosystems analyzes the temporal and spatial mechanisms that are underlying BEF relationships. A special focus lies on zooming in on biotic interactions as well as zooming out on the upscaling of BEF relationships to the landscape level.

Guiding questions:

- What are the most important spatial and temporal mechanisms underlying multi-trophic BEF relationships? How are these relationships modified through external drivers?
- What are the implications and applications of BEF relationships at the landscape level?
- How do community assembly and disassembly interact with EF across scales?
- Are increasing biodiversity–ecosystem functioning relationships with time caused by changing biotic interactions due to the interplay between multitrophic community assembly processes and eco-evolutionary dynamics?
- Which biodiversity facets and ecosystem functions can be extracted from remote sensing data?

Session 6: Data - New Tools, New Codes, New Prospects

Summary: The session on data seeks ways to put existing and new developments in computer science and data creation to use for integrative biodiversity science. Another focus are methods to foster open data, open access code and reproducible workflows.

Guiding questions:

- How to leverage the potential of existing and new developments in computer science and data creation to enable integrative biodiversity science?
- How to make iDiv a lighthouse for open FAIR data, code, and reproducible workflows?
- How to manage, describe, and display heterogeneous biodiversity data in such a way that it is truly and sustainably reusable by different communities?
- How to leverage computer science in future biodiversity monitoring schemes? (including automatic monitoring, IT-support for citizen science, data visualization and exploration etc.)
- How to mobilize existing data for biodiversity research?

Challenges:

- Ensuring reproducibility
- New indices and methods for remote sensing
- Providing and validating methods and tools (for e.g. ~omics applications)
- Research data management including (semi-)automatic generation of metadata, automated data quality checks, and tools for data visualization and exploration