

Three (3) postdoctoral fellowships are available in the "Biodiversity Synthesis" research group of Professor Jonathan Chase to be based at the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig (<http://www.idiv-biodiversity.de/>). iDiv is one of the six National Research Centres funded by the German Research Foundation (DFG). It is located in the city of Leipzig and jointly hosted by the Martin Luther University Halle-Wittenberg (MLU), the Friedrich Schiller University Jena (FSU), the University of Leipzig (UL), and the Helmholtz Centre for Environmental Research (UFZ). It is also supported by the Max Planck Society, the Leibniz Association, the Klaus Tschira Foundation and the Free State of Saxony. The central mission of iDiv is to promote theory-driven synthesis and data-driven theory in this emerging field and it houses the working groups of several professorships in biodiversity sciences, a number of postdoctoral associates and visitors, the Synthesis of Centre for Biodiversity Sciences (sDiv), the Young Biodiversity Research Training group (yDiv), and a series of international workshops. In addition, there are more than 75 biodiversity scientists in the Halle-Jena-Leipzig region and beyond who are members of the iDiv consortium.

The overall aim of the Biodiversity Synthesis research group of Professor Chase is to develop consistent ways to quantify, analyze and interpret patterns of biodiversity across scales in response to natural and anthropogenic drivers in the context of fundamental ecological theory. Recognizing the limitations of current approaches for analyzing and meta-analyzing patterns of biodiversity that are agnostic towards nonlinear scaling issues (e.g., effect sizes on species richness, diversity, and extrapolations and rarefactions of richness), this research group will refine and improve on tools that are able to explicitly compare biodiversity patterns and experimental results by disentangling the factors that underlie biodiversity (e.g., total and relative abundances, spatial patterns and aggregations) and how they respond to a number of drivers (e.g., biogeographic factors, disturbance, productivity, land use and fragmentation) (For an overview of the problem, see e.g., Chase, J. M., & Knight, T. M. (2013). Scale-dependent effect sizes of ecological drivers on biodiversity: why standardised sampling is not enough. *Ecology letters*, 16(s1), 17-26). We will use a combination of computational approaches with simulated and existing databases appropriate for these analyses, including vegetation plots (e.g., small-scale grassland plots, large-scale forest plots), marine surveys (e.g., corals, fishes), stream and lake surveys, terrestrial invertebrates and vertebrates, and microbes (including NGS analyses of microbiomes). Our ultimate goal is to interpret these patterns with respect to a robust theoretical framework that includes environmental, spatial, stochastic and biogeographical constraints.

Postdoctoral associates are expected to develop collaborations with Professor Chase as well as other members of the iDiv community within the context of the overall aim of the research group, including possible extensions of the approach. Possible extensions could (but are not limited to) incorporate temporal aspects of biodiversity change through time, responses of phylogenetic and functional diversity (and beta-diversity), analyses of microbial biodiversity, and theoretical approaches that examine biodiversity patterns and processes in space and time. In addition to their primary research responsibilities, postdocs will be expected to spend a fraction of their time in each of the following: collaborate with working groups of visiting international researchers through the associated Synthesis of Centre for Biodiversity Sciences (sDiv), participate in the training of graduate through the Young Biodiversity Research Training group (yDiv) and MLU, and help develop and implement international workshops for biodiversity analysis and interpretation.

Applications should have a PhD in a topic related to the research theme, evidence of publication success, and strong quantitative and computational skills, preferably including at least some of the following: simulation and analytical modelling, spatial analyses and GIS, multivariate approaches, structural equation modelling, null modelling, ecoinformatics/bioinformatics, and/or Bayesian approaches (programming skills in R is strongly preferred, but other languages will also be useful). The positions will be administered by the Martin Luther University Halle-Wittenberg, in cooperation with iDiv, are full time and are initially offered for one year with the possibility of two or more years depending on progress and funding. Salary for postdocs in Germany is fixed at Entgeltgruppe 13 TV-L, which is ample to live comfortably in the region. The start date is flexible, but should be as early as possible, preferably no later than January, 2015.

Applications should consist of a single .pdf file including (i) a letter of interest, (ii) a brief overview of research directions that might be carried out in the context of this position and the skills and experiences that the candidate has that could be applied to proposed work and other iDiv and sDiv activities (1-2 pages, maximum), (iii) curriculum vitae, and (iv) the names and email addresses of three individuals who could provide an evaluation of the candidate upon request. Application materials should be sent electronically as a single .pdf to [jonathan.chase@idiv.de](mailto:jonathan.chase@idiv.de). The cover letter should include the registration number 4-6893/14-D and be addressed to Professor Jonathan Chase, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig; Deutscher Platz 5e; 04103 Leipzig. Applications will be accepted until September 15th, 2014, but interested candidates should contact Professor Chase as soon as possible to indicate intention to apply and discuss possible research topics. For any questions and/or to indicate your interest in applying, feel free to contact Professor Chase by email ([jonathan.chase@idiv.de](mailto:jonathan.chase@idiv.de)). Severely disabled persons are encouraged to apply and will be given preference in the case of equal suitability. Women are also strongly urged to apply.

The working language at iDiv and its affiliated institutes is English. iDiv staff are prepared to assist incoming members navigate all facets of working and living in Germany (e.g., visas, living arrangements, etc.). However, private German language lessons will be made freely available at iDiv for those interested in developing a working knowledge of the language, which would facilitate living in the region. Leipzig is a medium-sized city with the benefits of a large city, including excellent public transportation, cultural activities, dining opportunities, city parks, an international school and family-friendly activities, but is among the least expensive places to live in Germany. It is also well situated within a 1 hour train ride to Berlin, and 2-4 hour train rides to Munich, Frankfurt and Prague

(Czech Republic), as well as a central airport with flights to many major destinations in Europe.