

## Curriculum Vitae

### Prof. Dr. Nico Eisenhauer



#### Contact details

<b>Position</b>	<b>Full Professor for Experimental Interaction Ecology</b>
Address	<sup>1</sup> German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Deutscher Platz 5e, 04103 Leipzig, Germany <sup>2</sup> Institute of Biology, Leipzig University, Deutscher Platz 5e, 04103 Leipzig, Germany
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Google Scholar	<a href="https://scholar.google.de/citations?user=OV0sKRkAAAAJ&amp;hl=en">https://scholar.google.de/citations?user=OV0sKRkAAAAJ&amp;hl=en</a>

#### Scientific career

Since 2014	Full Professor (W3) for <i>Experimental Interaction Ecology</i> , German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig and Leipzig University
2012 – 2014	Associate Professor (W2) for <i>Terrestrial Ecology</i> , Friedrich Schiller University Jena
2012	Habilitation ( <i>Venia Legendi</i> in Ecology and Zoology), Georg August University Göttingen
2012	Emmy Noether group leader, Technische Universität München
2012	Postdoc in the lab of Prof. Wolfgang W. Weisser, Technische Universität München

2010 – 2012	Postdoc in the lab of Prof. Peter B. Reich, University of Minnesota (DFG funded): <i>Aboveground–belowground interactions in a changing world</i>
2008 – 2010	Postdoc in the Jena Experiment, Darmstadt University of Technology and Georg August University Göttingen. Subproject <i>Decomposer Interaction Webs</i>
2005 – 2008	Ph.D. at the Darmstadt University of Technology under the supervision of Prof. Dr. S. Scheu. Title: <i>Earthworms in a plant diversity gradient: Direct and indirect effects on plant competition and establishment</i> as a part of the Jena Experiment funded by the German Research Foundation (DFG, FOR 456) ( <i>summa cum laude</i> )
2004 – 2005	Diploma thesis: <i>Invasion of a deciduous forest by earthworms: Changes in soil chemistry, microflora, microarthropods and vegetation</i> under the supervision of Prof. Dr. S. Scheu at the Darmstadt University of Technology, Germany and Prof. Dr. D. Parkinson at the University of Calgary, Canada ( <i>certified biologist with distinction</i> )
2000 – 2004	Study of Biology at the Darmstadt University of Technology
1999	Abitur at the Martin-Luther Gymnasium Rimbach ( <i>with distinction</i> )

### **Prizes and awards**

2015	<i>ERC Starting Grant</i> by the European Research Council
2014	<i>Top 40 unter 40</i> , Junge Elite 2014, Category Science, Capital (“Best of Germany”)
2014	<i>Heinz Maier-Leibnitz-Preis</i> by the German Research Foundation
2012	<i>Emmy-Noether scholarship</i> by the German Research Foundation
2010	<i>Postdoc research scholarship</i> by the German Research Foundation
2004	<i>Research scholarship</i> by the German Academic Exchange Service

### **Commission of trust**

2015 –	Speaker of the Research Unit of the Jena Experiment
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- 2014 – Editor-in-Chief at *Pedobiologia* – Journal of Soil Ecology  
2014 – Head of iDiv Ecotron  
2014 – yDiv Board member (Young Biodiversity Research Training Group of iDiv)

### **Editorial board**

- 2014 – **Editor-in-Chief at *Pedobiologia* – *Journal of Soil Ecology***  
2012 – 2013 Subject Editor at *Plant and Soil*  
2011 – 2013 Subject Editor at *Biodiversity and Conservation*

### **Reviewer for scientific journals and foundations**

**Scientific journals:** Applied Soil Ecology, Basic and Applied Ecology, Catena, Diversity, Ecology, Ecography, Ecology Letters, Écoscience, Ecosystems, European Journal of Soil Biology, Functional Ecology, Global Ecology and Biogeography, ISME Journal, Journal of Applied Ecology, Journal of Ecology, Journal of Vegetation Science, Nature, Nature Climate Change, Nature Communications, Nature Ecology and Evolution, Nature Plants, Oecologia, Oikos, Pedobiologia, Pedosphere, Plant Biology, Plant and Soil, PLoS ONE, Philosophical Transactions of the Royal Society B, Proceedings of the National Academy of Sciences USA, Proceedings of the Royal Society B, Science, Soil Biology and Biochemistry

**Foundations:** Czech Science Foundation, European Research Council, German Research Foundation, Helmholtz Impulse Fond, National Science Foundation USA, Swiss National Science Foundation

### **Memberships**

Deutscher Hochschulverband (DHV), Ecological Society of America (ESA), Ecological Society of Germany (GfÖ), Austria and Switzerland (GfÖ), German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig

### **Papers in peer-reviewed journals (chronologically, date of acceptance)**

(Google Scholar, July 14, 2017: GS H-index 38, i10-index 92, citations 4,496)

**2017**

- 162** Patoine G, Thakur MP, Friese J, Nock C, Höning L, Haase J, Scherer-Lorenzen M, **Eisenhauer N** (2017) *Plant litter functional diversity effects on litter mass loss depend on the macro-detritivore community*. **Pedobiologia**, accepted.
- 161** Ebeling A, Rzanny M, Lange M, **Eisenhauer N**, Hertzog LR, Meyer ST, Weisser WW (2017) *Plant diversity induces shifts in the functional structure and diversity across trophic levels*. **Oikos**, accepted.
- 160** Dietrich P, Buchmann T, Cesarz S, **Eisenhauer N**, Roscher C (2017) *Fertilization, soil and plant community characteristics determine soil microbial activity in managed temperate grasslands*. **Plant and Soil**, accepted.
- 159** Ferlian O, Wirth C, **Eisenhauer N** (2017) *Leaf and root C-to-N ratios are poor predictors of soil microbial biomass C and activity across 32 tree species*. **Pedobiologia**, accepted.
- 158** Wagg C, Ebeling A, Roscher C, Ravenek J, Bachmann D, **Eisenhauer N**, Mommer L, Buchmann N, Hillebrand H, Schmid B, Weisser WW (2017) *Functional trait dissimilarity drives both species complementarity and competitive disparity*. **Functional Ecology**, accepted.
- 157** Weisser WW, Roscher C, Meyer S, Ebeling A, Luo G, Allan E, Beßler H, Barnard R, Buchmann N, Buscot F, Engels C, Fischer C, Fischer M, Gessler A, Gleixner G, Halle S, Hildebrandt A, Hillebrand H, de Kroon H, Lange M, Leimer S, Le Roux X, Milcu A, Mommer L, Niklaus P, Oelmann Y, Proulx R, Roy J, Scherber C, Scherer-Lorenzen, Scheu S, Tschardt T, Wachendorf M, Wagg C, Weigelt A, Wilcke W, Wirth C, Schulze E-D, Schmid B, **Eisenhauer N** (2017) *Biodiversity effects on ecosystem functioning in a 15-year grassland experiment: Patterns, mechanisms, and open questions*. **Basic and Applied Ecology**, accepted.
- 156** Cesarz S, Ciobanu, M, Wright JW, Ebeling E, Vogel A, Weisser W, **Eisenhauer N** (2017) *Plant species richness sustains higher trophic levels of soil nematode communities after consecutive environmental perturbations*. **Oecologia**, accepted.

- 155** Thakur MP, Tilman D, Purschke O, Ciobanu M, Cowles J, Isbell F, Wragg PD, **Eisenhauer N** (2017) *Climate warming promotes species diversity but also taxonomic redundancy in complex environments*. **Science Advances**, accepted.
- 154** Liu M, Xia H, Fu S, **Eisenhauer N** (2017) *Tree diversity regulates soil respiration through accelerated tree growth in a mesocosm experiment*. **Pedobiologia**, DOI: 10.1016/j.pedobi.2017.05.005.
- 153** **Eisenhauer N**, Antunes PM, Bennett AE, Birkhofer K, Bissett A, Bowker MA, Caruso T, Chen B, Coleman DC, de Boer W, de Ruiter P, DeLuca TH, Frati F, Griffiths BS, Hart MM, Hättenschwiler S, Haimi J, Heethoff M, Kaneko N, Kelly LC, Leinaas HP, Lindo Z, Macdonald C, Rillig MC, Ruess L, Scheu S, Schmidt O, Seastedt TR, van Straalen NM, Tiunov AV, Zimmer M, Powell JR (2017) *Priorities for research in soil ecology*. **Pedobiologia** 63: 1-7.
- 152** Guerrero-Ramirez NR, **Eisenhauer N** (2017) *Trophic and non-trophic interactions influence the mechanisms underlying biodiversity–ecosystem functioning relationships under different abiotic conditions*. **Oikos**, DOI: 10.1111/oik.04190.
- 151** Thakur MP, Künne T, Griffin JN, **Eisenhauer N** (2017) *Warming magnifies predation and reduces prey coexistence in a model litter arthropod system*. **Proceedings of the Royal Society B: Biological Sciences**, DOI: 10.1098/rspb.2016.2570.
- 150** Yang Y, Xi Y, Zhong X, **Eisenhauer N**, Sun S (2017) *N addition suppresses the performance of grassland caterpillars (*Gynaephora alpherakji*) by decreasing group temperature*. **Ecosphere** 8: e01755.
- 149** Wu X, Cao R, Wei X, Xi X, Shi P, **Eisenhauer N**, Sun S (2017) *Soil drainage facilitates earthworm invasion and subsequent carbon loss from peatland soil*. **Journal of Applied Ecology**, DOI: 10.1111/1365-2664.12894 .
- 148** Shao Y, Zhang W, **Eisenhauer N**, Liu T, Xiong Y, Liang C, Fu S (2017) *Nitrogen deposition cancels out exotic earthworm effects on plant-feeding nematode communities*. **Journal of Animal Ecology**, DOI: 10.1111/1365-2656.12660.
- 147** Isbell F, Adler PR, **Eisenhauer N**, Fornara D, Kimmel K, Kremen C, Letourneau DK, Liebman M, Polley HW, Quijas S, Scherer-Lorenzen M (2017) *Benefits of increasing plant diversity in sustainable agroecosystems*. **Journal of Ecology**, DOI: 10.1111/1365-2745.12789.

- 146 Eisenhauer N**, Lanoue A, Strecker T, Scheu S, Steinauer K, Thakur MP, Mommer L (2017) *Root biomass and exudates link plant diversity with soil bacterial and fungal biomass*. **Scientific Reports** 7: 44641, DOI: 10.1038/srep44641.
- 145 Phillips HRP**, Cameron EK, Ferlian O, Türke M, Winter M, **Eisenhauer N** (2017) *Red list of a black box*. **Nature Ecology and Evolution** 1: article no 0103, DOI:10.1038/s41559-017-0103.
- 144 Cortois R**, Veen GFC, Duyts H, Abbas M, Strecker T, **Eisenhauer N**, Scheu S, Gleixner G, De Deyn G, van der Putten W (2017) *Possible mechanisms underlying abundance and diversity responses of nematode communities to plant diversity*. **Ecosphere**, DOI: 10.1002/ecs2.1719.
- 143 Clause J**, Forey E, **Eisenhauer N**, Seal CE, Soudey A, Colville L, Barot S (2017) *Seed selection by earthworms: chemical seed properties matter more than morphological traits*. **Plant and Soil** 413: 97-110, DOI:10.1007/s11104-016-3085-9.
- 142 Wright AJ**, de Kroon H, Visser EJW, Buchmann T, Ebeling A, **Eisenhauer N**, Fischer C, Hildebrandt A, Ravenek J, Roscher C, Weigelt A, Weisser WW, Voeselek LACJ, Mommer L (2017) *Plant species are less negatively affected by flooding when growing in species-rich plant communities*. **New Phytologist** 213: 645–656, DOI: 10.1111/nph.14185.
- 141 Craven D**, Thakur MP, Cameron EK, Frelich LE, Beausejour R, Blair RB, Blossey B, Burtis J, Choi A, Dávalos A, Fahey TJ, Fisichelli NA, Gibson K, Handa IT, Hopfensperger K, Loss SR, Nuzzo V, Maerz JC, Sackett T, Scharenboch BC, Smith SM, Vellend M, Umek LG, **Eisenhauer N** (2017) *The unseen invaders: introduced earthworms as drivers of change in plant communities in North American forests (a meta-analysis)*. **Global Change Biology**, DOI: 10.1111/gcb.13446.
- 140 Thakur MP**, Reich PB, Wagg C, Fisichelli NA, Ciobanu M, Hobbie SE, Rich RL, Stefanski A, **Eisenhauer N** (2017) *Effects of soil warming history on the performances of congeneric temperate and boreal herbaceous plant species and their associations with soil biota*. **Journal of Plant Ecology**, DOI: 10.1093/jpe/rtw066.

## **2016**

- 139** Leimer S, Oelmann Y, **Eisenhauer N**, Milcu A, Roscher C, Scheu S, Weigelt A, Wirth C, Wilcke W (2016) *Mechanisms behind plant diversity effects on inorganic and organic N leaching from temperate grassland*. **Biogeochemistry** 131: 339-353, DOI: 10.1007/s10533-016-0283-8.
- 138** Hu J, Wei Z, Friman V-P, Gu S-H, Wang X-F, **Eisenhauer N**, Yang T-J, Ma J, Shen Q-R, Xu Y-C, Jousset A (2016) *Probiotic diversity enhances rhizosphere microbiome function and plant disease suppression*. **mBio** 6: e01790-16, DOI: 10.1128/mBio.01790-16.
- 137** Macé OG, Steinauer K, Jousset A, **Eisenhauer N**, Scheu S (2016) *Flood-induced changes in soil microbial functions as modified by plant diversity*. **Plos One** 11: e0166349, DOI:10.1371/journal.pone.0166349.
- 136** Meyer ST, Ebeling A, **Eisenhauer N**, Hertzog L, Hillebrand H, Milcu A, Pompe S, Abbas M, Bessler H, Buchmann N, De Luca E, Engels C, Fischer M, Gleixner G, Hundewenz A, Klein A-M, de Kroon H, Leimer S, Loranger H, Mommer Y, Oelmann Y, Ravenek JM, Roscher C, Rottstock T, Scherber C, Scherer-Lorenzen M, Scheu S, Schmid B, Schulze E-D, Staudler A, Strecker T, Temperton V, Tschardt T, Vogel A, Voigt W, Weigelt A, Wilcke W, Weisser WW (2016) *Biodiversity effects strengthen over time as ecosystem functioning declines at low and increases at high biodiversity*. **Ecosphere** 7: e01619, DOI: 10.1002/ecs2.1619.
- 135** De Laender F, Rohr JR, Ashauer R, Baird DJ, Berger U, **Eisenhauer N**, Grimm V, Hommen U, Maltby L, Melià CJ, Pomati F, Roessink I, Radchuck V, Van den Brink PJ (2016) *Reintroducing environmental change drivers in biodiversity–ecosystem functioning research*. **Trends in Ecology and Evolution** 31: 905-915, DOI: 10.1016/j.tree.2016.09.007.
- 134** Cesarz S, Craven D, Dietrich C, **Eisenhauer N** (2016) *Effects of soil and leaf litter quality on the biomass of two engogeic earthworm species*. **European Journal of Soil Biology** 77: 9-16.
- 133** Xi X, Li D, Peng Y, **Eisenhauer N**, Sun S (2016) *Experimental warming and precipitation interactively modulate the mortality rate and timing of spring emergence of a gallmaking Tephritid fly*. **Scientific Reports** 6: 32284.

- 132** Steinauer K, Chatzinotas A, **Eisenhauer N** (2016) *Root exudate cocktails: the link between plant diversity and soil microorganisms?* **Ecology and Evolution** 6: 7387-7396, DOI: 10.1002/ece3.2454.
- 131** Mueller KE, Blumenthal DM, Carrillo Y, Cesarz S, Ciobanu M, Hines J, Pabst S, Pendall E, de Tomasel CM, Wall DH, **Eisenhauer N** (2016) *Elevated CO<sub>2</sub> and warming shift the functional composition of soil nematode communities in a semiarid grassland.* **Soil Biology and Biochemistry** 103: 46-51, DOI: 10.1016/j.soilbio.2016.08.005.
- 130** Jousset A, **Eisenhauer N**, Merker M, Mouquet N, Scheu S (2016) *High functional diversity stimulates diversification in experimental microbial communities.* **Science Advances** 2: e1600124.
- 129** **Eisenhauer N**, Barnes AD, Cesarz S, Craven D, Ferlian O, Gottschall F, Hines J, Sendek A, Siebert J, Thakur MP, Türke M (2016) *Biodiversity–ecosystem function experiments reveal the mechanisms underlying the consequences of biodiversity change in real world ecosystems.* **Journal of Vegetation Science** 27: 1061-1070, DOI: 10.1111/jvs.12435.
- 128** **Eisenhauer N** (2016) *Plant diversity effects on soil microorganisms: spatial and temporal heterogeneity of plant inputs increase soil biodiversity.* **Pedobiologia** 59: 175-177.
- 127** Hertzog LR, Ebeling A, Meyer ST, Wagg C, **Eisenhauer N**, Weisser WW (2016) *High survival of ant communities to summer flooding in an European grassland.* **Plos One**, 11: e0152777, DOI: 10.1371/journal.pone.0152777.
- 126** Strecker T, González Macé O, Scheu S, **Eisenhauer N** (2016) *Functional composition of plant communities determines the spatial and temporal stability of soil microbial properties in a long-term plant diversity experiment.* **Oikos** 125: 1743-1754, DOI: 10.1111/oik.03181.
- 125** Latz E, **Eisenhauer N**, Rall BC, Scheu S, Jousset A (2016) *Unravelling linkages between plant community composition and the pathogen-suppressive potential of soils.* **Scientific Reports** 6: 23584.
- 124** Steinauer K, Jensen B, Strecker T, de Luca E, Scheu S, **Eisenhauer N** (2016) *Convergence of soil microbial properties after plant colonization of an experimental plant diversity gradient.* **BMC Ecology** 16: 19. **BMC Ecology Featured Article.**



- 123** do Couto GM, **Eisenhauer N**, de Oliveira EB, Cesarz S, Feliciano ALP, Marangon LC (2016) *Response of soil microbial biomass and activity in early restored lands in the northeastern Brazilian Atlantic Forest*. **Restoration Ecology** 24: 609-616, DOI: 10.1111/rec.12356.
- 122** Fischer FM, Wright AJ, **Eisenhauer N**, Ebeling A, Roscher C, Wagg C, Weigelt A, Weisser WW, Pillar VD (2016) *Plant species richness and functional traits affect community stability after a flood event*. **Philosophical Transactions of the Royal Society B** 371: 20150276.
- 121** Craven D, Isbell F, Manning P, Connolly J, Bruelheide H, Ebeling A, Roscher C, van Ruijven J, Weigelt A, Wilsey B, Beierkuhnlein C, de Luca E, Griffin JN, Hautier Y, Hector A, Jentsch A, Kreyling J, Lanta V, Loreau M, Meyer ST, Mori AS, Naeem S, Palmborg C, Polley HW, Reich PB, Schmid B, Siebenkäs A, Seabloom E, Thakur MP, Tilman D, Vogel A, **Eisenhauer N** (2016) *Plant diversity effects on grassland productivity are robust to both nutrient enrichment and drought*. **Philosophical Transactions of the Royal Society B** 371: 20150277.
- 120** Mariotte P, LeBayon R-C, **Eisenhauer N**, Guenat C, Buttler A (2016) *Subordinate plant species moderate drought effects on earthworm communities in grasslands*. **Soil Biology and Biochemistry** 96: 119-127.
- 119** Bohan DA, Landuyt D, Ma A, Macfadyen S, Martinet V, Massol F, McInerney G, Montoya JM, Mulder C, Pascual U, Pockock MJO, White P, Blanchemanche S, Bonkowski M, Bretagnolle V, Brönmark C, Dicks L, Dumbrell A, **Eisenhauer N**, Friberg N, Gessner MO, Gill RG, Gray C, Houghton A, Ibanez S, Jensen J, Jeppesen E, Jokela J, Lacroix G, Lannou C, Lavorel S, Le Galliard J-F, Lescourret F, Liu S, Loeuille N, McLaughlin O, Muggleton S, Peñuelas J, Petanidou T, Petit S, Pomati F, Raffaelli D, Rasmussen J, Raybould A, Reboud X, Richard G, Scherber C, Scheu S, Sutherland WJ, Tamaddon-Nezhad A, ter Braak C, Termansen M, Thompson MSA, Tschardtke T, Vacher C, van der Geest H, Voigt W, Vonk JA, Zhou X, Woodward G (2016) *Networking Our Way to Better Ecosystem Service Provision*. **Trends in Ecology and Evolution** 31: 105-115.
- 118** Cameron E, Decaens T, Lapied E, Porco D, **Eisenhauer N** (2016) *Earthworm databases and ecological theory: Synthesis of current initiatives and main research directions*. **Applied Soil Ecology** 104: 85-90, DOI:10.1016/j.apsoil.2015.11.012.

- 117 Mueller KE, **Eisenhauer N**, Reich PB, Hobbie SE, Chadwick OA, Chorover J, Dobies T, Hale CM, Jagodziński AM, Kałucka I, Kasprowicz M, Kieliszewska-Rokicka B, Modrzyński J, Rożen A, Skorupski M, Sobczyk Ł, Stasińska M, Trocha LK, Weiner J, Wierzbicka A, Oleksyn J (2016) *Light, earthworms, and soil resources as predictors of diversity of 10 soil invertebrate groups across monocultures of 14 tree species*. **Soil Biology and Biochemistry** 92: 184-198.
- 116 Ferreira ACC, Leite LFC, de Araújo ASF, **Eisenhauer N** (2016) *Land-use type effects on soil organic carbon and microbial properties in a semiarid region of Northeast Brazil*. **Land Degradation and Development** 27: 171-178, DOI: 10.1002/ldr.2282.

## **2015**

- 115 Hines J, van der Putten WH, De Deyn GB, Wagg C, Voigt W, Mulder C, Weisser WW, Engel J, Melian C, Scheu S, Birkhofer K, Ebeling A, Scherber C, **Eisenhauer N** (2015) *Towards an integration of biodiversity–ecosystem functioning and food web theory to evaluate relationships between multiple ecosystem services*. **Advances in Ecological Research** 53: 161-200.
- 114 Mulder C, Bennett EM, Bohan DA, Bonkowski M, Carpenter SR, Chalmers R, Cramer W, Durance I, **Eisenhauer N**, Fontaine C, Haughton AJ, Hettelingh JP, Hines J, Ibanez S, Jeppesen E, Krumins Adams J, Ma A, Mancinelli G, Massol F, McLaughlin Ó, Naeem S, Pascual U, Peñuelas J, Pettorelli N, Pocock MJO, Raffaelli D, Rasmussen JJ, Rusch GM, Scherber C, Setälä H, Sutherland WJ, Vacher C, Voigt W, Vonk JA, Wood SA, Woodward G (2015) *10 years later: revisiting priorities for science and society a decade after the Millenium Ecosystem Assessment*. **Advances in Ecological Research** 53: 1-53.
- 113 Hacker N, Ebeling A, Gessler A, Gleixner G, González Macé O, de Kroon H, Lange M, Mommer L, **Eisenhauer N**, Ravenek J, Scheu S, Weigelt A, Wagg C, Wilcke W, Oelmann Y (2015) *Plant diversity shapes microbe-rhizosphere effects on P mobilization from organic matter in soil*. **Ecology Letters** 18: 1356-1365.
- 112 Huang J, Zhang W, Liu M, **Eisenhauer N**, Briones MJI, Shao Y, Cai X, Fu S, Xia H (2015) *Different impacts of native and exotic earthworms on rhizodeposit carbon sequestration in a subtropical soil*. **Soil Biology and Biochemistry** 90: 152-160.

- 111 Isbell F, Craven D, Connolly J, Loreau M, Schmid B, Beierkuhnlein H, Bezemer TM, Bonin C, Bruelheide H, de Luca E, Ebeling A, Griffin J, Guo Q, Hautier Y, Hector A, Jentsch A, Kreyling J, Lanta V, Manning P, Meyer ST, Mori AS, Naeem S, Niklaus PA, Polley HW, Reich PB, Roscher C, Seabloom EW, Smith MD, Thakur MP, Tilman D, Tracy BF, van der Putten WH, van Ruijven J, Weigelt A, Weisser WW, Wilsey B, **Eisenhauer N** (2015) *Biodiversity increases the resistance of ecosystem productivity to climate extremes*. **Nature** 526: 574-577.
- 110 Ramirez KS, Döring M, **Eisenhauer N**, Gardi C, Ladau J, Leff JW, Letendu G, Lindo Z, Rillig MC, Russel D, Scheu S, St. John MG, de Vries FT, Wubet T, van der Putten WH, Wall DH (2015) *Toward a global platform for linking soil biodiversity data*. **Frontiers in Ecology and Evolution** 3: 91.
- 109 Wagner D, **Eisenhauer N**, Cesarz S (2015) *Plant species richness does not attenuate responses of soil microbial and nematode communities to a flood event*. **Soil Biology and Biochemistry** 89: 135-149.
- 108 Thakur MP, Milcu A, Manning P, Niklaus PA, Roscher C, Power S, Reich PB, Scheu S, Tilman D, Ai F, Guo H, Ji R, Pierce S, Guerrero Ramirez N, Richter AN, Steinauer K, Strecker T, Vogel A, **Eisenhauer N** (2015) *Plant diversity drives soil microbial biomass carbon in grasslands irrespective of global environmental change factors*. **Global Change Biology** 21: 4076-4085, DOI: 10.1111/gcb.13011.
- 107 Powell JR and **Eisenhauer N** (2015) Editorial: *Pedobiologia in 2015: The International Year of Soils*. **Pedobiologia** 58: 57-58, DOI: 10.1016/j.pedobi.2015.04.001.
- 106 Shao Y, Bao W, Chen D, **Eisenhauer N**, Zhang W, Pang X, Xu G, Fu S (2015) *Using structural equation modeling to test established theory and develop novel hypotheses for the structuring forces in soil food webs*. **Pedobiologia** 58: 137-145, DOI: 10.1016/j.pedobi.2015.06.001.
- 105 Thakur MP, Herrmann M, Steinauer K, Rennoch S, Cesarz S, **Eisenhauer N** (2015) *Cascading effects of belowground predators on plant communities are density-dependent*. **Ecology and Evolution** 5: 4300-4314, DOI: 10.1002/ece3.1597. **Editor's Choice**.
- 104 Hines J, **Eisenhauer N**, Drake BG (2015) *Inter-annual changes in detritus-based food chains can enhance plant growth response to elevated atmospheric CO<sub>2</sub>*. **Global Change Biology** 21: 4642-4650, DOI: 10.1111/gcb.12965.

- 103** Strecker T, Barnard RL, Niklaus PA, Scherer-Lorenzen M, Weigelt A, Scheu S, **Eisenhauer N** (2015) *Effects of plant diversity, functional group composition, and fertilization on soil microbial properties in experimental grassland*. ***Plos One*** 10(5): e0125678. DOI: 10.1371/journal.pone.0125678.
- 102** **Eisenhauer N**, Bowker MA, Grace JB, Powell JR (2015) *From patterns to causal understanding: Structural equation modeling (SEM) in soil ecology*. ***Pedobiologia*** 58: 65-72, DOI: 10.1016/j.pedobi.2015.03.002.
- 101** Kirchberger J, **Eisenhauer N**, Weisser WW, Türke M (2015) *Experimental evaluation of herbivory on live plant seedlings by the earthworm *Lumbricus terrestris* L. in the presence and absence of soil surface litter*. ***Plos One*** 10(4): e0123465. DOI: 10.1371/journal.pone.0123465.
- 100** Thakur MP and **Eisenhauer N** (2015) *Plant community composition determines the strength of top-down control in a soil food web motif*. ***Scientific Reports*** 5: 9134.
- 099** Xi X, **Eisenhauer N**, Sun S (2015) *Parasitoid wasps indirectly suppress seed production by stimulating consumption rates of their seed-feeding hosts*. ***Journal of Animal Ecology*** 84: 1103-1111, DOI: 10.1111/1365-2656.12361.
- 098** Xi X, Mu J, Peng Y, **Eisenhauer N**, Sun S (2015) *Capitulum density-dependent effects generate peak seed yield at an intermediate density of a Tibetan lotus*. ***Journal of Plant Ecology***, DOI: 10.1093/jpe/rtv025.
- 097** Mueller KE, Hobbie SE, Chorover J, Reich PB, **Eisenhauer N**, Castellano MJ, Chadwick OA, Dobies T, Hale CM, Jagodziński AM, Kałucka I, Kieliszewska-Rokicka B, Modrzyński J, Rozen A, Skorupski M, Sobczyk L, Stasińska M, Trocha LK, Weiner J, Wierzbicka A, Oleksyn J (2015) *Effects of litter traits, soil biota, and soil chemistry on soil carbon stocks at a common garden with 14 tree species*. ***Biogeochemistry*** 123: 313-327. DOI: 10.1007/s10533-015-0083-6.
- 096** Lefcheck JS, Byrnes JEK, Isbell F, Gamfeldt F, Griffin JN, **Eisenhauer N**, Hensel MJS, Hector A, Cardinale BJ, Duffy JE (2015) *Biodiversity enhances ecosystem multifunctionality across trophic levels and habitats*. ***Nature Communications*** 6: 6936. DOI:10.1038/ncomms7936.
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## **Book chapters**

- (I) Kulmatiski A, Hines J, **Eisenhauer N** (2014) *Soil organism effects on grassland production and diversity*. In: Grasslands: Habitat Management, Impact of Plant Diversity and Conservation Strategies (Editors: Mariotte P and Kardol P), NOVA Publisher, New York.

## **Other publications**

- (k) Türke M, Feldmann R, Fürst B, Hartmann H, Herrmann M, Klotz S, Mathias G, Meldau S, Ottenbreit M, Reth S, Schädler M, Trogisch S, Buscot F, **Eisenhauer N** (2017) *Multitrophische Biodiversitätsmanipulation unter kontrollierten Umweltbedingungen im iDiv Ecotron*. **17. Gumpensteiner Lysimetertagung** 2017: 107-114.
- (j) **Eisenhauer N**, Kratz W, Neinaß J, Powell JR (2017) *Resolution of respect for Ekkehard von Törne (1925 – 2017)*. **Pedobiologia**, DOI: 10.1016/j.pedobi.2017.05.002.
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- (g) **Eisenhauer N** (2011) *Aboveground–belowground interactions in a changing world*. Habilitation thesis, Georg-August-University Göttingen, Germany.
- (f) **Eisenhauer N** (2011) *Aboveground–Belowground Linkages: Biotic Interactions, Ecosystem Processes and Global Change*, Bardgett RD and Wardle DA. Oxford University Press, Oxford (2010). *Book review*. *Basic and Applied Ecology* 12: 478-479.
- (e) Asshoff R, Fricke A and **Eisenhauer N** (2010) *Regenwurm ist nicht gleich Regenwurm – Ein Experiment zur Verdeutlichung der unterschiedlichen Ökologie von Regenwürmern*. *Praxis der Naturwissenschaften Biologie in der Schule*.
- (d) **Eisenhauer N** and Scheu S (2009) *Experimenting with earthworms in the field: The method and impacts of earthworms on the diversity-ecosystem functioning relationship*. *Berichte der Deutschen Bodenkundlichen Gesellschaft*, Tagungsbeitrag zu: Workshop Kommission III „Bodenökologie und Bodenbiologie“ der DBG; Titel der Tagung: *Experimenting with earthworms* (Trier), <http://www.dbges.de>.
- (c) **Eisenhauer N** (2008) *Earthworms in a plant diversity gradient: Direct and indirect effects on plant competition and establishment*. PhD thesis (**summa cum laude**), Darmstadt University of Technology, Germany.
- (b) **Eisenhauer N** and Scheu S (2005) *Invasion europäischer Lumbriciden in einen kanadischen Espenwald: Auswirkungen auf Bodenchemie, Mikroflora, Bodenmesofauna und Vegetation*. *Mitteilungen der Deutschen Bodenkundlichen Gesellschaft* 107: 7-8.



(a) **Eisenhauer N** (2005) *Invasion europäischer Lumbriciden in einen kanadischen Espenwald: Auswirkungen auf Vegetation, Bodenmesofauna, Mikroflora und Bodenchemie*. Diploma thesis (**with distinction**), Darmstadt University of Technology, Germany.

## Grants

- 2016 Co-PI in the project *Soil microbial community assessment with portable mid-infrared and visible near-infrared spectroscopy* (PI: Prof. Michael Vohland; FlexPool funding in the German Centre of Integrative Biodiversity Research; ~110,000 €)
- 2016 Experimental infrastructure funding for the MyDiv experiment; funded by iDiv (German Centre of Integrative Biodiversity Research; ~30,000 €)
- 2016 Experimental infrastructure funding for the iDiv Ecotron facility; funded by iDiv (German Centre of Integrative Biodiversity Research; ~93,000 €)
- 2016 PI in the German Centre of Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig (4 years); with other 24 PIs, funded by the German Research Foundation (FTZ 118, ~35,500,000 €)
- 2016 sDiv workshop in iDiv (German Centre of Integrative Biodiversity Research) and position for synthesis postdoc (2 years), *sWorm*, Workshop Organizer, with Dr. Erin Cameron (~165,000 €)
- 2016 ERC Starting Grant funded by the European Research Council, Ecosystem responses to exotic earthworm invasion in northern North American forests (~1,500,000 €)
- 2015 PI in the Jena Experiment (FOR 1451), Subproject Z: Coordination, funded by the German Research Foundation, Ei 862/5-3 (196,929 €)
- 2015 Speaker of the Jena Experiment (FOR 1451), Coordination funds, funded by the German Research Foundation, Ei 862/10-1 (136,569 €)
- 2015 PI in the Jena Experiment (FOR 1451), Subproject 6: Consumer community structure and ecosystem functioning, funded by the German Research Foundation, Ei 862/12-1 (97,310 €)

- 2015 PI in the Jena Experiment (FOR 1451), Subproject 7: Context-dependence of biodiversity effects and real-world perspective, funded by the German Research Foundation, Ei 862/13-1 (24,237 €)
- 2015 Postdoc funding (1 year) for scientific coordination of the Ecotron facility; funded by iDiv (German Centre of Integrative Biodiversity Research; ~64,000 €)
- 2014 sDiv workshop in iDiv (German Centre of Integrative Biodiversity Research), *Biodiversity Changes*, Workshop Organizer, with Prof. Dr. Forest Isbell (travel funds; ~20,000 €)
- 2014 PI in *Tracing the spread of European earthworms into North America using molecular markers and field experiments* with Dr. Ina Schaefer; funded by the German Research Foundation, Ei 862/9-1 (~60,000 €)
- 2013 Postdoc funding (1 year) for synthesis work on the consequences of flood on plant communities differing in diversity; funded by iDiv (German Centre of Integrative Biodiversity Research; postdoc funding plus travel funds; ~68,000 €)
- 2013 sDiv workshop in iDiv (German Centre of Integrative Biodiversity Research), *Plant diversity effects on ecosystem resilience and recovery from perturbations*, Workshop Organizer, with Dr. Forest Isbell (travel funds plus 9 months postdoc funding; ~66,000 €)
- 2013 PI in the *Jena Experiment*, Subproject Z: *Coordination*, funded by the German Research Foundation, Ei 862/5-2 (1,579,655 €)
- 2013 PI in the *Jena Experiment*, Subproject 2: *Plant–soil fauna interactions*, funded by the German Research Foundation, Ei 862/3-2 (155,453 €); Co-PI with Prof. S. Scheu (~150,000 €)
- 2012 Emmy Noether group funded by the German Science Foundation, Ei 862/2, *Aboveground–belowground interactions drive the relationship between plant diversity and ecosystem function* (877,440 €; for 5 years, 3 Ph.D.s)
- 2011 National Science Foundation, USA, *The complexity of global change- interactive effects of warming, water availability, CO<sub>2</sub> and N on grassland ecosystem function* (US\$ 950,839; with Prof.

- P.B. Reich, Prof. Dr. S. Hobbie, Prof. Dr. R. Montgomery, Dr. R. Rich)
- 2011 Department of Energy, USA, *Climate change impacts at the temperate-boreal ecotone: interactions between warming and precipitation*, (~ US\$ 2,500,000; with Prof. P.B. Reich, Prof. Dr. S. Hobbie, Prof. Dr. R. Montgomery, Dr. R. Rich)
- 2011 German Academic Exchange Foundation, Travel expenses for the Annual Meeting of the Ecological Society of America in Austin, TX, USA (~800 €)
- 2011 Co-PI (with Dr. Alexandre Jousset) in *The role of plant diversity for the promotion of bacterial communities responsible for soil suppressiveness against phytopathogens* (JO 935/2), funded by the German Research Foundation (168,600 €)
- 2011 Co-PI (with Dr. Olaf Butenschoen) in *A biodiversity approach to improve bioremediation strategies for PAH contaminated soils*, funded by the Federal Ministry of Education and Research, Germany (21,312 €)
- 2010 Post-Doc Scholarship by the German Research Foundation, Ei 862/1 (~100,000 €)
- 2010 PI in the *Jena Experiment* (with Prof. Dr. Stefan Scheu), SP4: Plant – soil fauna interactions, funded by the German Research Foundation (~280,000 €)
- 2004 Scholarship by the German Academic Exchange Foundation (~3,000 €)

### Visiting scientists

- 2017 Tao Liu (University of the Chinese Academy of Sciences, China, 12 months)
- 2017 Cameron Wagg (Department of Evolutionary Biology and Environmental Studies, University of Zürich; 1 month)
- 2017 Erin Cameron (Metapopulation Research Centre, Department of Biosciences, University of Helsinki, Finland and Center for Macroecology, Evolution and Climate Change, University of Copenhagen, Denmark; 6 months).

- 2016 Alexandra Wright (Fashion Institute of Technology, Manhattan, USA; 1 month).
- 2016 Marcel Ciobanu (Institute of Biological Research, Cluj-Napoca, Romania; two times for 1.5 months each).
- 2015 Jara Domínguez (Instituto de Recursos Naturales y Agrobiología de Sevilla (IRNAS), Spain): Spatial relationships between trees and soil communities (4 months).
- 2015 Marcel Ciobanu (Institute of Biological Research, Cluj-Napoca, Romania): *Soil nematodes in plant-soil feedback effects* (1 month).
- 2014 – 2015 Gabriela Martucci do Couto (Universidade Federal Rural de Pernambuco, Recife, Brazil): *Soil biodiversity effects on ecosystem functioning* (12 months). Postdoc scholarship by the Brazilian Research Foundation.
- 2014 Perla Mellado (MPI for Biogeochemistry, Jena, Germany): *Linking plant diversity effects on soil processes by shifts in microbial communities* (2 months).
- 2014 Marcel Ciobanu (Institute of Biological Research, Cluj-Napoca, Romania): *Plant diversity effects on free-living soil nematodes* (3 months).
- 2014 Eliška Kuřáková (Department of Botany, Faculty of Science, Charles University Prague, Czech Republic): *Soil feedback effects as modified by decomposers* (2 months).
- 2013 – 2015 Mengyun Liu (South China Botanical Garden, the Chinese Academy of Sciences, Guangzhou, China): *Tree and decomposer diversity effects on soil carbon dynamics*. Funded by the University of Chinese Academy of Sciences.
- 2013 Marcel Ciobanu (Institute of Biological Research, Cluj-Napoca, Romania): *Impact of summer drought and plant diversity on free-living soil nematodes* (3 months). Funded by ExpeER.
- 2013 Ademir S. F. Araújo (Federal University of Piauí, Agricultural Science Center, Soil Quality Laboratory, Teresina, Brazil): *Impact of land degradation and restoration on soil organisms* (1 week). Funded by CNPq Brazil.

2012 – 2013 Gabriela Martucci do Couto (Universidade Federal Rural de Pernambuco, Recife, Brazil): *Soil microbial properties in different land renaturation treatments in Brazilian riparian ecosystems (7 months)*. Funded by the Brazilian Sandwich Program.

## Supervised theses

### Ph.D. theses

- 2017 – Christopher Hutengs: *Soil microbial community assessment with portable mid-infrared and visible to near-infrared spectroscopy* (Leipzig University, with Michael Vohland)
- 2016 – Felix Gottschall: *Tree diversity effects on the spatial and temporal variability of belowground processes* (Leipzig University)
- 2015 – Christian Ristok: *Plant and soil biodiversity effects on the plant metabolome* (Jena/Leipzig, with Nicole van Dam)
- 2014 – Julia Siebert: *Soil food webs and functions in a changing world* (Leipzig University)
- 2014 – Andreas Klein: *Tracing the spread of European earthworms into North America using molecular markers and field experiments* (Göttingen/Leipzig, with Ina Schaefer)
- 2013 – 2017 Katja Steinauer: *The role of plant traits in the relationship between plant diversity and the performance of soil organisms* (Leipzig University; *magna cum laude*)
- 2013 – Nathaly Guerrero Ramirez: *Good polycultures or bad monocultures – which mechanisms are driven positive biodiversity–ecosystem functioning relationships?* (Leipzig University)
- 2012 – 2016 Madhav Thakur: *Does global change intensify plant diversity effects on soil biota and subsequent feedback effects?* (Leipzig University; *summa cum laude*)
- 2011 – 2015 Ellen Latz: *Effect of plant diversity on soil bacterial communities responsible for soil suppressiveness against phytopathogens* (Georg-August-Universität Göttingen, with Dr. A. Jousset; *magna cum laude*)

2010 – Tanja Strecker: *Plant – soil fauna interactions in a plant diversity gradient: the functional composition of soil food webs* (Georg-August-Universität Göttingen, with Prof. Dr. S. Scheu)

**Diploma theses, master theses, bachelor theses, research practicals**

2017 – Karl Andraczek: *Nematodendiversität in Bryophyten in Baumkronen des Leipziger Auwalds*

2017 – Domenica Reichert: *Anwendung von Schneckenkot als biologischer Pflanzenschutz vor Herbivoren im Feld*

2017 – Marie Sünemann: *Effects of drought and nutrients on soil communities and functions*

2017 – Justus Hennecke: *Plant invasions: experimental test of the enemy release hypothesis*

2017 – Tom Künne: *Effects of exotic earthworms on tree herbivory in two aspen species*

2016 – 2017 Vera Quast: *The role of mutualists in plant co-existence*

2016 Sascha Spalek: *Schneckenkot als biologischer Pflanzenschutz vor Herbivoren*

2016 – Guillaume Patoine: *Tree diversity effects on soil animal communities*

2015 – 2016 Inés Martin: *Interactive effects of warming, drought, CO<sub>2</sub>, and N deposition on soil communities*

2015 – 2016 Maria Feustel: *Ausbreitung von Hornmilben (Oribatida) durch Schnecken im Auwald*

2015 – 2016 Katharina Stolze: *Einfluss von anözischen Regenwürmern auf mikrobielle Gemeinschaften in der Drilosphäre und hydrophobe Eigenschaften der Gangwände*

2015 – 2016 Peter Dietrich: *Underlying mechanisms of deteriorating plant monocultures over time*

2015 – 2016 Benjamin Schwarz: *Effects of warming on soil food web structure*

2015 Tom Künne: *Temperature and predation effects on the interaction between two Collembola species*

- 2014 – 2015 Anne Helling: *How does decomposer diversity affect mass loss of standardized root litter?*
- 2014 Annika Eva Schulz: *Comparing different nematode extraction techniques*
- 2014 Nicolas Philip Betsche: *Side effects of mustard solution for earthworm extraction on plant competition*
- 2014 Annabell Richter: *Plant diversity and soil animal effects on soil microbial communities and functions*
- 2013 – 2015 Susann Pabst: *The effect of elevated CO<sub>2</sub> and temperature on soil biota and the success of native vs invasive plants*
- 2013 – 2014 Daniela Wirsch: *Optimizing the bait lamina method*
- 2013 – 2015 Daniela Wagner: *Does plant diversity buffer effects of flooding on soil nematode communities?*
- 2013 Benjamin Schwarz: *Tree diversity and identity effects on earthworm communities*
- 2013 – 2014 Saskia Rennoch: *Effects of soil food web complexity on plant community composition and productivity*
- 2013 – 2014 Julia Siebert: *Effects of elevated temperature and altered precipitation regimes on soil food web structure*
- 2013 Julia Friese: *Litter decomposition as affected by the functional diversity of trees and decomposers*
- 2013 Ariane Zander: *Getting to the bottom: how deep go plant diversity effects on soil microorganisms?*
- 2013 Kristin Wagner: *Efficiency of different earthworm extraction methods*
- 2012 – 2014 Josephine Grenzer: *Collembola identity and diversity effects on soil microbial communities and ecosystem multifunctionality*
- 2012 – 2013 Katja Steinauer: *Interactive effects of warming and plant diversity on soil microbial community structure and functions*
- 2012 Yasemin Günay: *Transgressive overyielding of soil microbial biomass in a grassland plant diversity gradient*
- 2012 Katja Steinauer: *Effects of N deposition on soil organisms and functions in two deciduous forests*

- 2010 Wiebke Schulz: *Influence of biodiversity and resource complexity on the invasibility of bacterial communities*
- 2010 Karolin Thomisch: *Struktur des Bodennahrungsnetzes in einem Pflanzendiversitätsgradienten*
- 2009 – 2010 Florian Andreas Schwarzmüller: *Dynamic stability and interaction strengths in soil food-web motifs*
- 2009 – 2010 Ellen Latz: *Correlation between plant diversity and soil suppressiveness*
- 2009 Johanna Brenner: *Einfluss von Pflanzendiversität auf Abundanzen, Diversität und zeitliche Stabilität der Bodenmakrofauna einer experimentell angelegten Graslandgesellschaft*
- 2009 Stefan Radsick: *Haben Regenwürmer nährstoffreiche Nahrungsquellen? Der Fraß an Pflanzensamen und Keimlingen*
- 2008 Matthias Klier: *Nematoden in einem Pflanzendiversitätsgradienten: Einfluss auf Mikroorganismen und Pflanzenwachstum*
- 2008 Felix Schonert: *Einfluss von Pflanzendiversität auf die Bodenfauna einer experimentell angelegten Graslandgemeinschaft (awarded by the state of Hesse: „Best teachers‘ thesis in 2008“)*
- 2008 Svenja Gass: *Einfluss von Pflanzendiversität und funktioneller Identität auf Nematodengemeinschaften*
- 2007 – 2008 Daniela Straube: *Nonlinearity of effects of invasive ecosystem engineers on abiotic soil properties and soil biota*
- 2007 Christiane Schmidt: *Einfluss von funktionellen Pflanzengruppen und ausgesäter Diversität, sowie Insektizidapplikation auf die Myriapodagruppen Chilopoda und Symphyla*
- 2007 Daniela Straube: *Efficiency of two widespread non-destructive extraction methods under dry soil conditions for different ecological earthworm groups*
- 2006 – 2008 Volker Hörsch: *Wechselwirkungen zwischen Zersettern (Lumbricidae: Aporectodea caliginosa und Lumbricus terrestris) und phytopathogenen Pilzen (Fusarium graminearum): Einfluss*



*auf das Wachstum und den Befall von Weizen (Triticum aestivum) durch Pflanzenfresser (Rhopalosiphum padi)*  
2006 – 2007 Martin Schuy: *Direkte und indirekte Wirkung von Regenwürmern auf die Keimung von Pflanzensamen*

## **Organized sessions / workshops**

- 2017** ► Organization of the workshop *sWORM - A global soil biodiversity database and its application to data synthesis and theory development*, Leipzig, Germany.
- 2017** ► Organization of the workshop *Community assembly in BEF experiments*, Leipzig, Germany.
- 2017** ► Organization of the workshop *The Future of Biodiversity–Ecosystem Functioning Research*, Jena, Germany.
- 2017** ► Organization of the Symposium *15 Years of the Jena Experiment: the Past, the Present, and the Future*, Jena, Germany.
- 2015** ► Organization of the on-site review of the Research Unit of the Jena Experiment (FOR 1451), Jena, Germany.
- 2015** ► Organization of the session *Illuminating the black box: causes, consequences, and capture of interactions in soil* at the Annual Meeting of the GfÖ (Gesellschaft für Ökologie), Göttingen, Germany.
- 2014** ► Organization of the sDiv workshop *Biodiversity Changes* in Leipzig, Germany (with Forest Isbell).
- 2014** ► Organization of the sDiv workshop *Plant diversity effects on ecosystem resistance to and recovery from perturbations – workshop II* in Leipzig, Germany (with Dylan Craven and Forest Isbell).
- 2014** ► Organization of the session *Novel Soils: Aboveground-belowground interactions in a changing world* at the annual meeting of the GfÖ (Gesellschaft für Ökologie), Hildesheim, Germany.
- 2014** ► Organization of the ‘*Network*’ workshop in Jena, Germany (with Jes Hines and Wolfgang Weisser).

- 2013** ► Organization of the sDiv workshop *Plant diversity effects on ecosystem resistance to and recovery from perturbations* in Leipzig, Germany (with Forest Isbell).
- 2013** ► Organization of the session *Microorganisms in biodiversity–ecosystem functioning research* at the annual meeting of the GfÖ (Gesellschaft für Ökologie), Potsdam, Germany (with Kirsten Küsel).
- 2012** ► Organization of the session *The Jena Experiment* of the DAAD Science Tour 2012, Understanding Biodiversity and Climate Change, Jena, Germany (with Anne Ebeling).
- 2012** ► Organization of the session *Soil Ecology in a Changing World* at the annual meeting of the GfÖ (Gesellschaft für Ökologie), Lüneburg, Germany (with Liliane Ruess).
- 2011** ► Organization of the session *Effects of invasive earthworms on biogeoscience processes* at the annual meeting of the Canadian Geophysical Union, Banff, Kanada (with Edward A Johnson).

## Talks

### 2017

- *Das iDiv-Ecotron: Integration von Experiment und Theorie*. Plenary talk at the iDiv Ecotron inauguration, Bad Lauchstädt, Germany.
- *Community Assembly in Biodiversity–Ecosystem Experiments*. Opening talk at the workshop “Community assembly in BEF experiments”, Leipzig, Germany.
- *15 Years Jena Experiment: the Past, the Present, and the Future*. Opening talk at the Symposium “15 Years Jena Experiment: the Past, the Present, and the Future”, Jena, Germany.
- *The dark site of biodiversity*. Ökologisches Kolloquium des Instituts für Zoologie, Universität zu Köln, Köln, Germany (invited talk).

## 2016

- ▶ *Embracing the complexity of aboveground-belowground networks and links to ecosystem functioning*. Wissenschaftliches Festkolloquium zu Ehren von Herrn Prof. Dr. François Buscot, Halle, Germany (invited talk).
- ▶ *The Jena Experiment 2016–2018*. Kick-off meeting Jena Experiment postdocs, Jena, Germany.
- ▶ *Da ist der Wurm drin!?* Science Notes, Leipzig, Germany.
- ▶ *Die dunkle Seite der Biodiversität*. Stipendiatentreffen DAAD (German Academic Exchange Service), Leipzig, Germany (invited talk).
- ▶ *Bridging iDiv and BIBS*. Kick-off meeting „Bridging in Biodiversity Science“ at Berlin-Brandenburg Institute of Advanced Biodiversity Research, Berlin, Germany (invited talk).
- ▶ *Die dunkle Seite der Biodiversität*. Bundeskongress des Verbands zur Förderung des MINT-Unterrichts (MNU), Leipzig, Germany (invited talk).
- ▶ *What happens after the submission of my paper?* yDiv Editors Workshop, Leipzig, Germany (invited talk).
- ▶ *The dark site of biodiversity*. Dresdner Zoologische Kolloquien, Senckenberg Naturhistorische Sammlungen Dresden, Dresden, Germany (invited talk).

## 2015

- ▶ *iDiv – Wissenschaftliche Glanzlichter*. Festakt zum 3. Geburtstag von iDiv, Leipzig, Germany.
- ▶ *Biodiversity–ecosystem functioning relationships in a changing world*. Annual iDiv Conference, Session Functions, Leipzig, Germany (**Keynote talk**).
- ▶ *Aboveground–belowground interactions as drivers of biodiversity effects on ecosystem functions and services*. Symposium: Soils and Human Health: Linking Soil, Plants, and the Environment to Human and Animal Health. Annual meetings of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America with the Entomological Society of America with the title “*Synergy in Science: Partnering for Solutions*”. Minneapolis, MN, USA (invited symposium talk).

- ▶ *Plant–soil fauna interactions*. Workshop of the Research Unit of the Jena Experiment, Jena, Germany.
- ▶ *The dark side of biodiversity*. Inaugural lecture at Leipzig University, Leipzig, Germany.
- ▶ *Ecosystem Responses to Exotic Earthworm Invasion in Northern North American Forests*. Interview by the European Research Council for an ERC Starting Grant (Panel Evolutionary, Population and Environmental Biology), Brussels, Belgium (invited).
- ▶ *The Jena Experiment – General Introduction*. On-site review of the Research Unit of the Jena Experiment, Jena, Germany.
- ▶ *The design of the Jena Experiment*. yDiv Summer School on Synthesis, Leipzig, Germany.
- ▶ *Within-experiment synthesis in the Jena Experiment*. yDiv Summer School on Synthesis, Leipzig, Germany.
- ▶ *Experimental Interaction Ecology*. Scientific Advisory Board workshop, German Centre for Integrative Biodiversity Research (iDiv) Jena-Halle-Leipzig, Germany.
- ▶ *Structure and functioning of soil food webs*. Global Change Experimental Facility strategy workshop, UFZ Halle, Germany.

## 2014

- ▶ *Die dunkle Seite der Biodiversität*. Science Notes, Tübingen, Germany (invited talk).
- ▶ *Plant diversity effects on the stability of plant biomass production*. sDiv workshop Plant diversity effects on ecosystem resistance to and recovery from perturbations – workshop II in Leipzig, Germany.
- ▶ *Pervasive effects of exotic earthworm invasion on the biodiversity of North American forests: a meta-analysis*. 10<sup>th</sup> International Symposium on Earthworm Ecology, Athens, GA, USA (**Plenary talk**).
- ▶ *Aboveground–belowground interactions in a changing world*. Department of Plant Biology Seminar, University of Georgia, Athens, GA, USA (invited).

- ▶ *How to integrate new visions – Experimental Interaction Ecology*. iDiv Workshop ‘How to integrate new visions at iDiv’, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Leipzig, Germany.
- ▶ *Plant diversity effects on soil microbial communities*. Workshop on forest diversity effects on ecosystem functioning, Royal Holloway University of London, Egham, UK (invited).
- ▶ *Identifying the drivers of belowground communities using structural equation modelling*. sDiv Workshop: ‘A framework to improve our understanding of the distribution of global soil biodiversity: establishing the first quantitative synthesis (sOILDIV)’, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Leipzig, Germany.
- ▶ *Flood effects on belowground consumers*. Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.
- ▶ *Scaling of aboveground–belowground networks*. ‘Networks Workshop’, Friedrich Schiller University Jena, Germany.
- ▶ *The design of the Jena Experiment*. ‘Networks Workshop’, Friedrich Schiller University Jena, Germany.

## 2013

- ▶ *Soil biodiversity – too redundant to be true?* Oberseminar Allgemeine Botanik und Pflanzenphysiologie, Friedrich Schiller University Jena, Germany (invited).
- ▶ *Stoichiometric responses of soil organisms to forest management*. Biodiversity Exploratories on-site review, Potsdam, Germany.
- ▶ *Unraveling the mechanisms underlying biodiversity–ecosystem functioning relationships using path analysis*. Biodiversity Exploratories workshop “Ecosystem Processes”, MPI-BGC Jena, Germany (invited **Keynote Talk**).
- ▶ *Plant diversity effects on soil food webs are stronger than those of elevated CO<sub>2</sub> and N deposition in a long-term grassland experiment*. Annual meeting of the GfÖ (Gesellschaft für Ökologie), Potsdam, Germany.

- ▶ *Plant diversity effects on soil food webs are stronger than those of elevated CO<sub>2</sub> and N deposition in a long-term grassland experiment.* Annual meeting of the Ecological Society of America (ESA), Minneapolis, USA.
- ▶ *Soil animals and some major processes they drive.* Ph.D. course at International Max Planck Research School for Global Biogeochemical Cycles, MPI for Biogeochemistry, Jena, Germany (invited).
- ▶ *Soil biodiversity – too redundant to be true?* Faculty Colloquium, Friedrich Schiller University Jena, Germany (invited).
- ▶ *Soil biodiversity – too redundant to be true?* POPBIO meeting, 26<sup>th</sup> Plant Population Biology Conference, Tartu, Estonia (invited **Keynote Talk**).
- ▶ *Aboveground – belowground interactions in a changing world and iDiv.* Symposium on 'Integrative Biodiversity Research', Full Professorship 'Experimental Interaction Ecology', iDiv, German Centre for Integrative Biodiversity Research, Leipzig, Germany.
- ▶ *Licht in den dunklen Boden: Steuergrößen und funktionelle Wichtigkeit von Biodiversität im Boden.* Leipzig Book Fair 2013, Leipzig, Germany (invited).
- ▶ *TreeDivNet going belowground?* Annual meeting of the TreeDivNet, Florence, Italy.
- ▶ *Soil biodiversity – too redundant to be true?* Seminar, UFZ Halle, Germany (invited).
- ▶ *Plant diversity effects on soil organisms and functions – putting the story into perspective.* Institute Seminar, Max-Planck-Institute for Chemical Ecology, Jena, Germany (invited).

## 2012

- ▶ *The Jena Experiment – Results.* DAAD Science Tour 2012, Understanding Biodiversity and Climate Change, Jena, Germany (invited).
- ▶ *The Jena Experiment – Experimental design.* DAAD Science Tour 2012, Understanding Biodiversity and Climate Change, Jena, Germany (invited).

- ▶ *Aboveground–belowground interactions in a changing world*. Symposium W3 Professor for Ecology and Evolution of Animals, Technical University of Munich, Freising, Germany (invited).
- ▶ *Plant diversity effects on ecosystem functioning depend on decomposer diversity and identity*. Annual meeting of the GfÖ (Gesellschaft für Ökologie), Lüneburg, Germany.
- ▶ *Plant diversity effects on soil organisms and resulting feedback effects: the longer you look, the more you see*. Workshop 10 years Jena Experiment, Jena, Germany.
- ▶ *Soil biota and processes in a changing world*. Forest Ecology Seminar, University of Minnesota, MN, USA.
- ▶ *Effects of warming on soil biota in the B4WarmED experiment*. B4WarmED Workshop 2012, University of Minnesota, MN, USA.

## 2011

- ▶ *Plant diversity effects on ecosystem functioning depend on decomposer diversity and identity*. Forest Ecology Seminar, University of Minnesota, MN, USA.
- ▶ *Aboveground–belowground interactions in a changing world*. Symposium W2 Professor for Terrestrial Ecology, Friedrich-Schiller-University Jena, Jena, Germany (invited).
- ▶ *Aboveground–belowground interactions as a source of complementarity effects in biodiversity experiments*. Annual Meeting of the Ecological Society of America, Austin, TX, USA (invited).
- ▶ *Global change below ground: impacts of elevated CO<sub>2</sub>, N and summer drought on soil food webs and biodiversity*. Cedar Creek Summer Symposium, Cedar Creek Ecosystem Science Reserve, MN, USA (invited).
- ▶ *Interactive effects of global warming and “global worming”*. Annual Meeting of the Canadian Geophysical Union, Banff, Kanada.
- ▶ *Impacts of aboveground diversity loss on belowground processes*. B4WarmED Workshop, Cloquet Forestry Centre, MN, USA (invited).
- ▶ *Aboveground – belowground interactions in a changing world*. Forest Ecology Outburst, University of Minnesota, MN, USA (invited).

▶ *Belowground functional shifts*. B4WarmED Symposium, University of Minnesota, MN, USA.

## 2010

▶ *Aboveground – belowground interactions in a changing world*. Forest Ecology Seminar, University of Minnesota, MN, USA.

▶ *Aboveground – belowground interactions in a changing world*. Prof. S. Hobbie's lab group seminar, University of Minnesota, MN, USA (invited).

▶ *Importance of earthworm-seed interactions for the composition of plant communities: a review*. 5<sup>th</sup> International Symposium-Workshop on Frugivores and Seed Dispersal, Montpellier, France (invited **Plenary Talk**).

▶ *Impacts of aboveground diversity loss on belowground processes*. Soil Science Seminar, University of Nanjing, China (invited).

▶ *Linkage between aboveground and belowground diversity*. Colloquium of Soil Science, University of Hohenheim, Germany (invited).

▶ *Plant – soil fauna interactions*. Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

▶ *The role of soil fauna for plant performance and ecosystem functioning in a plant diversity gradient*. Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

## 2009

▶ *Soil animals affect the diversity-ecosystem function relationship*. Oberseminar Biodiversität, University of Göttingen, Germany.

▶ *Soil animals affect the diversity-ecosystem function relationship*. Lunchtime Seminar, Imperial College London, Silwood Park, London, England (invited).

▶ *Additive Effekte primärer und sekundärer Zersetzer auf Winterweizen beeinflussen oberirdische Herbivore*. GfÖ Workshop: Biodiversität im Boden, Berlin, Germany.

▶ *Experimenting with earthworms in the field: The method and impacts of earthworms on the diversity-ecosystem functioning relationship*. DBG Workshop: Experimenting with earthworms, Trier, Germany (invited).



▶ *Do animals alter the diversity-stability relationship?* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

## 2008

▶ *Invasibility of experimental grassland communities: The role of plant diversity, plant functional group identity and earthworms.* EURECO-GfÖ meeting: Biodiversity in an ecosystem context, Leipzig, Germany.

▶ *Invasibility of experimental grassland communities: The role of plant diversity, plant functional group identity and earthworms.* GfÖ Workshop: Multitrophic Interactions, Göttingen, Germany.

▶ *Direct effects of earthworms on plant communities.* Seminar: Probleme der Freilandökologie, Gießen, Germany (invited).

▶ *Split plot analysis.* Weekly Seminar, Darmstadt University of Technology.

▶ *Decomposers in the Jena Experiment.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

▶ *Multilevel stability in a plant diversity gradient.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

## 2007

▶ *Earthworms as drivers of the competition between grasses and legumes.* 37<sup>th</sup> Annual Conference Ecological Society of Germany, Austria and Switzerland, Marburg, Germany.

▶ *Earthworms as drivers of the competition between grasses and legumes.* ESA/SER Joint Meeting, San José, California, USA.

▶ *The role of soil fauna for plant performance and ecosystem functioning in a plant diversity gradient.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

▶ *Soil fauna in the Jena Experiment.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

## 2006

► *Invasion of European earthworms into a North American aspen forest: Effects on soil chemistry, microflora, fauna and vegetation.* The 8<sup>th</sup> International Symposium on Earthworm Ecology, Kraków, Poland.

► *The role of soil fauna for plant performance and ecosystem functioning in a plant diversity gradient.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

► *Earthworms as drivers of the competition between grasses and legumes.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

## 2005

► *Invasion of European earthworms in a North American aspen forest: Effects on soil chemistry, microflora, fauna, and vegetation.* Workshop above ground and below ground: Decomposer and primary producer interactions, Joint Meeting of the GfÖ and DBG, Witzenhausen, Germany.

► *The role of soil fauna for plant performance and ecosystem functioning in a plant diversity gradient.* Workshop of the Research Consortium of the Jena Experiment, Jena, Germany.

## Teaching experience

2017	<i>Einführung in die Methoden der wissenschaftlichen Arbeit,</i> practical and seminar for bachelor students
2016	<i>Einführung in die Ökologie,</i> lecture 3 SWS for bachelor students (with Prof. Dr. Christian Wirth)
2016	<i>Biodiversity Experiments,</i> yDiv graduate short course, 2 ECPS
2016	<i>Effects of invasive earthworms on soil biodiversity – a meta-analysis,</i> yDiv Summer School, 1 week
2015	<i>Tierökologie</i> at Leipzig University, lecture 2 SWS
2015	<i>Within and across-experiment synthesis,</i> yDiv Summer School, full-day course
2014	<i>Biodiversity Experiments,</i> yDiv graduate short course, 2 ECPS
2014	<i>Writing a scientific paper,</i> lecture, 1 SWS
2014	<i>Writing a scientific paper,</i> practical, 2 SWS

2013	<i>Ecological Experiments</i> at the FSU Jena, practical, 2 SWS
2013	<i>Experiments in Ecology</i> at the FSU Jena, seminar, 1 SWS
2013	<i>Experimental Ecology</i> at the FSU Jena, lecture, 2 SWS
2013	<i>How to write a paper</i> at the FSU Jena, practical, 2 SWS
2013	<i>Einführung in die Bodenökologie</i> at the FSU Jena, lecture 2 SWS
2013	<i>Grundpraktikum Ökologie</i> , 3 SWS
2013	<i>Vertiefungspraktikum Ökologie</i> at the FSU Jena
2013	<i>Kleine Ökologische Exkursionen</i> at the FSU Jena
2013	<i>Classic Papers in Ecology Seminar</i> at the FSU Jena, 2 SWS
2012-2014	<i>Methods in Field Ecology</i> at the FSU Jena
2012-2014	<i>Institute Seminar</i> at the FSU Jena, 1 SWS
2012	<i>Advanced Ecological Seminar</i> at the FSU Jena, 2 SWS
2012	Lecture/Project <i>Biodiversität</i> at the TUM, 4 SWS
2012	<i>Terrestrial Practical</i> (basic practical) at the TUM, 4 SWS
2012	<i>Research Practical in Terrestrial Ecology</i> at the TUM, 16 SWS
2008, 2012	Guest lectures on <i>Split-plot analysis</i>
2004 – 2009	Leader of fourteen zoological expeditions at the Darmstadt University of Technology and at the University of Göttingen

## **Miscellaneous**

2011	Parental leave, 6 months (Maira)
2009	Parental leave, 3 months (Elina)
1986 –	I love soccer