

# Curriculum vitae

## Dr. Simone Cesarz

### Contact details

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Position	Head of Laboratory @ Experimental Interaction Ecology, iDiv
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### Scientific Career

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05/2014 - present	<b>Head of Laboratory at Leipzig University, iDiv</b> Experimental Interaction Ecology, Prof. Dr. Nico Eisenhauer  Main research topics: <ul style="list-style-type: none"><li>• BEF research</li><li>• Microbiell Respiration</li><li>• Free living soil nematodes as indicator taxa</li><li>• Global analyses of soil microbial diversity and function</li><li>• Forest ecology</li><li>• Global Change Ecology</li><li>• Fatty acid analysis</li></ul>
01/2013 – 04/2014	<b>Head of Laboratory at Friedrich-Schiller-Universität Jena</b> Aboveground-belowground interactions, Prof. Dr. Nico Eisenhauer
05/2008 – 04/2012	<b>Ph.D. at the Georg-August-Universität Göttingen</b> PhD thesis: "Plant species and global change agents as driving factors of rhizosphere processes and soil nematode communities" Supervisor: Prof. Dr. Stefan Scheu
10/2001 – 06/2007	<b>Study of Biology at Georg-August-Universität Göttingen</b> Diploma thesis: "The effect of tree diversity on earthworms in a deciduous forest: Community composition the effect of soil and litter quality" Supervisor: Prof. Dr. Matthias Schaefer

## Publications

37. Dietrich P, Roeser A, **Cesarz S**, Eisenhauer N, Ebeling A, Schmid B, Schulze ED, Wagg C, Weigelt A, Roscher C (2019) Nematode communities, plant nutrient economy, and life-cycle characteristics jointly determine plant monoculture performance over 12-years: *Oikos*. doi.org/10.1111/oik.06989
36. Gottschall F, Davids S, Newiger-Dous TE, Auge H, **Cesarz S**, Eisenhauer N (2019) Tree species identity determines wood decomposition via microclimatic effects. *Ecology and Evolution* 9:12113-12127.
35. **Cesarz S**, Schulz, Annika, Beugnon R, Eisenhauer N (2019) Testing soil nematode extraction efficiency using different variations of the Baermann-funnel method. *Soil Organisms* 91:61-72
34. González Macé O, Ebeling A, Eisenhauer N, **Cesarz S**, Scheu S (2019) Variations in trophic niches of generalist predators with plant community composition as indicated by stable isotopes and fatty acids. *Soil Organisms* 91:45-59.
33. Thakur MP, Del Real IM, **Cesarz S**, Steinauer K, Reich PB, Hobbie S, Ciobanu M, Rich R, Worm K, Eisenhauer N (2019) Soil microbial, nematode, and enzymatic responses to elevated CO<sub>2</sub>, N fertilization, warming, and reduced precipitation. *Soil Biology and Biochemistry* 135:184-193.
32. Global mismatches in aboveground and belowground biodiversity (2019) Cameron EK, Martins IS, Lavelle P, Mathieu J, Tedersoo L, Bahram M, Gottschall F, Guerra CA, Hines J, Patoine G, Siebert J, Winter M, **Cesarz S**, Kreff H, Lovejoy TE, Montanarella L, Orgiazzi A, Pereira HM, Phillips HRP, Settele J, Wall DH, Eisenhauer N. *Conservation Biology* 33:1187-1192
31. Ciobanu M, Eisenhauer N, Stoica IA, **Cesarz S** (2018) Natura 2000 priority and non-priority habitats do not differ in soil nematode diversity. *Applied Soil Ecology* 135:166-173.
30. Giling DP, Beaumelle L, Phillips HRP, **Cesarz S**, Eisenhauer N, Ferlian O, Gottschall F, Guerra C, Hines J, Sendek A, Siebert J, Thakur MP, Barnes AD (2018) A niche for ecosystem multifunctionality in global change research. *Global Change Biology* 25:763-774.
29. Siebert J, Suennemann M, Auge H, Berger S, **Cesarz S**, Ciobanu M, Guerrero-Ramirez NR, Eisenhauer N (2018) The effects of drought and nutrient addition on soil organisms vary across taxonomic groups, but are constant across seasons. *Scientific Reports* 9:639
28. Kufáková E, **Cesarz S**, Münzbergová Z, Eisenhauer N (2018) Soil microarthropods alter the outcome of plant-soil feedback experiments. *Scientific Reports* 8:11898
27. Cameron EK, Martins IS, Lavelle P, Mathieu J, Tedersoo L, Gottschall F, Guerra CA, Hines J, Patoine G, Siebert J, Winter M, **Cesarz S**, Delgado-Baquerizo M, Ferlian O, Fierer N, Kreff H, Lovejoy TE, Montanarella L, Orgiazzi AS, Pereira HM, Phillips HRP, Settele J, Wall DH, Eisenhauer N (2018) Global gaps in soil biodiversity data. *Nature Ecology and Evolution* 2:1042-1043. 26. Ferlian O, **Cesarz S**, Craven D, Hines J, Barry KE, Bruehlheide H, Buscot F, Haider S, Heklau H, Herrmann S, Kühn P, Pruschitzki U, Schädler U, Wagg C, Weigelt A, Wubet T, Eisenhauer N (2018) Mycorrhiza in tree diversity-ecosystem function relationships: conceptual framework and experimental implementation. *Ecosphere* 9:e02226
25. Milcu A, Puga-Freitas R, Ellison AM, Blouin M, Scheu S, Freschet GT, Rose L, Barot S, **Cesarz S**, Eisenhauer N, Girin T, Assandri D, Bonkowski M, Buchmann N, Butenschoen O, Devidal S, Gleixner G, Gessler A, Gigon A, Greiner A, Grignani C, Hansart A, Kayler Z, Lange M, Lata J-C, Le Galliard J-F, Lukac M, Mannerheim N, Müller MEH, Pando A, Rotter P, Scherer-Lorenzen M, Seyhun R, Urban-Mead K, Weigelt A, Zavattaro L, Roy J (2018). Genotypic variability enhances the reproducibility of an ecological study. *Nature Ecology & Evolution* 2:279-287.
24. Hines J, Pabst S, Mueller KE, Blumenthal DM, **Cesarz S**, Eisenhauer N (2017) Soil-mediated effects of global change on plants communities depend on plant growth form. *Ecosphere* 8: 1-15.
23. 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* 419: 189-199.
22. **Cesarz S**, Ciobanu M, Wright AJ, Ebeling A, Vogel A, Weisser WW, Eisenhauer N (2017) Plant species richness sustains higher trophic levels of soil nematode communities after consecutive environmental perturbations. *Oecologia* 184: 715-728.
21. Rughoeff S, Herrmann M, Lazar CS, **Cesarz S**, Levick S, Trumbore S, Küsel K (2016) Community composition and abundance of nitrifiers and total bacterial and archaeal populations in savanna soils on contrasting bedrock material in Kruger National Park, South Africa. *Frontiers in Microbiology* 7: 1638.
20. **Cesarz S**, Craven D, Dietrich C, Eisenhauer N (2016) Effects of soil and leaf litter quality on the biomass of two endogeic earthworm species. *European Journal of Soil Biology* 77: 9-16.
19. Mueller K, Blumenthal DM, Carrillo Y, **Cesarz S**, Ciobanu M, Hines J, Pabst S, Pendall E, de Tomasel CM, Wall D, 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.

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18. Eisenhauer N, Barnes A, **Cesarz S**, Craven D, Ferlian O, Gottschall F, Hines J, Sendek A, Siebert J, Thakur M, 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.
  17. 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.
  16. 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.
  15. 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* 19: 4300-4319.
  14. Schwarz B, Dietrich C, **Cesarz S**, Scherer-Lorenzen M, Auge H, Schulz E, Eisenhauer N (2015) Non-significant tree diversity but significant identity effects on earthworm communities in three tree diversity experiments. *European Journal of Soil Biology* 67: 17-26.
  13. **Cesarz S**, Reich PB, Scheu S, Ruess L, Schaefer M and Eisenhauer N (2015) Nematode functional guilds, not trophic groups, reflect shifts in soil food webs and processes in response to interacting global change factors. *Pedobiologia* 58: 23-32.
  12. Araújo ASP, Borges CD, Tsai SM, **Cesarz S**, Eisenhauer N (2014) Soil bacterial diversity in degraded and restored lands of Northeast Brazil. *Antonie van Leeuwenhoek* 106: 891-899.
  11. Ferlian O, **Cesarz S**, Marhan S, Scheu S (2014) Carbon food resources of earthworms of different ecological groups as indicated by <sup>13</sup>C compound-specific stable isotope analysis. *Soil Biology and Biochemistry* 77: 22-30.
  10. Steinauer K, Tilman D, Wragg PD, **Cesarz S**, Cowles JM, Pritsch K, Reich PB, Weisser WW, Eisenhauer N (2014) Plant diversity effects on soil microbial functions and enzymes are stronger than warming in a grassland experiment. *Ecology* 96: 99-112.
  09. Eisenhauer N, Wirsch D, **Cesarz S**, Craven D, Dietrich P, Friese J, Helm J, Hines J, Schellenberg M, Scherreijs P, Schwarz B, Uhe C, Wagner K, Steinauer K (2014) Organic textile dye improves the visual assessment of the bait-lamina test. *Applied Soil Ecology* 82: 78-81.
  08. Thakur MP, Reich P, Fisichelli N, Stefanski A, **Cesarz S**, Dobies T, Rich R, Hobbie S, Eisenhauer N (2014) Nematode community shifts in response to experimental warming and canopy conditions are associated with plant community changes in the temperate-boreal forest ecotone. *Oecologia* 175: 713-723.
  07. Araújo ASF, Eisenhauer N, Nunes LAPL, Leite LFC, **Cesarz S** (2013) Soil surface-active fauna in degraded and restored lands of Northeast Brazil. *Land Degradation & Development* 26: 1-8.
  06. Araújo ASF, **Cesarz S**, Leite LFC, Daniel C, Tsai S, Eisenhauer N (2013) Soil microbial properties and temporal stability in degraded and restored lands of Northeast Brazil. *Soil Biology and Biochemistry* 66: 175-181.
  05. Eisenhauer N, Dobies T, **Cesarz S**, Hobbie SE, Meyer RJ, Worm K, Reich PB (2013) 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. *PNAS* 110: 6889-6894.
  04. **Cesarz S**, Ruess L, Jacob M, Jacob A, Schaefer M and Scheu S (2013) Tree species diversity versus tree species identity: driving forces in structuring forest food webs as indicated by soil nematodes. *Soil Biology and Biochemistry* 62: 36-45.
  03. **Cesarz S**, Fender A-C, Beyer F, Valtanen K, Pfeiffer B, Gansert D, Hertel D, Polle A, Daniel R, Leuschner C and Scheu S. (2013) Roots from beech (*Fagus sylvatica* L.) and ash (*Fraxinus excelsior* L.) differentially affect soil microorganisms and carbon dynamics. *Soil Biology and Biochemistry* 61: 23-32.
  02. Eisenhauer N, **Cesarz S**, Koller R, Worm K and Reich PB (2012) Global change below ground: impacts of elevated CO<sub>2</sub>, nitrogen and summer drought on soil food webs and biodiversity. *Global Change Biology* 18: 435-447.
  01. **Cesarz S**, Fahrenholz N, Migge-Kleian S, Platner C, Schaefer M (2007) Earthworm communities in relation to tree diversity in a deciduous forest. *European Journal of Soil Biology* 43: 61-67.
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