

Christophe Dominik

POSTDOCTORAL RESEARCHER

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10.11.1985 | French nationality



Summary

Practical experience in landscape ecology, agroecology, and community ecology. 10+ years of experience in geographical information systems (GIS) and statistical software (R). 5+ years of experience in fieldwork and arthropod identification. 1+ year of work experience abroad (Philippines). Strong interests in landscape ecology, macroecology, pollination services, biological control, community ecology, gut microbiome, and data visualization.



Education

Martin Luther University Halle-Wittenberg

DR. RER. NAT. | MAGNA CUM LAUDE

Halle (Saale), Germany

2019

Université de La Réunion

MASTER OF SCIENCE IN BIODIVERSITY AND TROPICAL ECOSYSTEMS

Saint-Denis, Réunion Island

2011

Université Henri-Poincaré (UHP Nancy-1)

BACHELOR OF SCIENCE IN BIOLOGY OF ORGANISMS AND POPULATIONS

Nancy, France

2009



Research Experience

Helmholtz-Zentrum für Umweltforschung (UFZ)

POSTDOCTORAL RESEARCHER | DEPARTMENT OF COMMUNITY ECOLOGY (BZF)

Halle (Saale), Germany

Jan. 2019 - present

P.I.: Schweiger O. | Main projects: PoshBee, VODOO, INTERCEDE, iINTERACT, Safeguard, MAMBO, RestPoll, WildPosh, ANTENNA

- Mapping and classification of > 200 study sites using ArcGIS Pro.
- Fieldwork including nectar/haemolymph extraction, pollinator sampling, beekeeping activities, bumblebee experiments, pitfall traps.
- P.I. of three third-party funded projects iINTERACT, iPATHOS, iPATHOTELS.
- Co-P.I. and WP leader of the INTERCEDE project.
- Project budget management.
- Supervision of PhD students, Master students, and scientific staff.

Helmholtz-Zentrum für Umweltforschung (UFZ)

PHD STUDENT/GUEST SCIENTIST | DEPARTMENT OF COMPUTATIONAL LANDSCAPE ECOLOGY (CLE)

Leipzig, Germany

Jul. 2012 - Dec. 2018

PhD Thesis: *The effects of landscape heterogeneity on arthropod communities in rice agroecosystems.*

Supervisors: Seppelt R. and Václavík T. | Magna Cum Laude | Main project: LEGATO

- Mapping and classification of 30 study sites using ArcGIS 10.
- Landscape heterogeneity quantification via the calculation of landscape metrics (Fragstats).
- Supervision of technical staff.

International Rice Research Institute (IRRI)

GUEST SCIENTIST | CROP AND ENVIRONMENTAL SCIENCES DIVISION (CESD)

Los Baños Laguna, Philippines

Jun. 2013 - Sep. 2014

Advisor: Horgan F.G. | Main project: LEGATO

- Sampling and arthropod identification (~ 80000 individuals) to morphospecies level (~ 200 morphospecies).
- Supervision of fieldwork assistants in the mountainous region of the Philippines.

Centre national de la recherche scientifique (CNRS)

RESEARCH ASSISTANT | LITTORAL, ENVIRONNEMENT, GÉOMATIQUE, TÉLÉDÉTECTION (UMR LETG)

Nantes, France

Mar. 2012 - Jun. 2012

Supervisor: Godet L. | Main project: ECOSAL ATLANTIS

- Bird counts of common European passerine birds in salinas during two weeks.
- Mapping of the salinas located in Ré Island using ArcView 3.1 and calculation of landscape metrics (Fragstats).

Centre national de la recherche scientifique (CNRS)

Nantes, France

UNDERGRADUATE RESEARCH STUDENT | LITTORAL, ENVIRONNEMENT, GÉOMATIQUE, TÉLÉDETECTION (UMR LETG)

Feb. 2011 - Jun. 2011

M.Sc. Thesis: *Influence des structures spatiales sur la distribution des oiseaux terrestres dans un paysage fragmenté: cas des marais salants de Guérande.*

Supervisor: Godet L. | M.Sc.2 Thesis grade: 16.67/20 Rank: 2/17 | Main project: ECOSAL ATLANTIS

- Methods and analyses similar to the research experience carried out in 2012 at the CNRS (see above).

Centre de coopération internationale en recherche agronomique pour le développement (CIRAD)

Saint-Pierre, Réunion Island

UNDERGRADUATE RESEARCH STUDENT | PEUPELEMENTS VÉGÉTAUX ET BIO-AGRESSEURS EN MILIEU TROPICAL (UMR PVBMT)

Jan. 2010 - Jun. 2010

Supervisor: Quilici S. | M.Sc.1 Thesis grade: 15.73/20 Rank: 5/35

- Semi-field experiments: Infestation of four plant species within the Rosacea family with 40 larvae of *Cibdela janthina*.
- Daily survival monitoring and GLM analysis to test the food specificity of *C.janthina* on Rosacea plants.

Presentations

INTERNATIONAL CONFERENCES

SFE GFÖ EEE - Joint meeting, International Conference on Ecological Sciences

Metz, France

DOMINIK C., WOGRAM S., MICHALSKI S., SCHWEIGER O.

Nov. 2022

Talk: Pollen limitation, local resource availability, and pollinator community composition affect the fertilization success of *Scabiosa ochroleuca*.

SCAPE - Scandinavian Association of Pollination Ecology - Annual Meeting

Höör, Sweden

PAPANIKOLAOU A.D., KÜHN I., FRENZEL M., ..., POTTS S.G., ROBERTS S.P.M., SCHWEIGER O.

Oct. 2019

Poster: Wild bee and floral diversity co-vary in response to the direct and indirect impacts of land use.

GfÖ - Ecological Society of Germany, Austria, and Switzerland - Annual Meeting

Vienna, Austria

DOMINIK C., HORGAN F.G., SETTELE J., SEPPELT R., VÁCLAVÍK T.

Sep. 2018

Talk: Landscape composition, configuration, and trophic interactions shape arthropod communities in rice agro-ecosystems.

GfÖ - Ecological Society of Germany, Austria, and Switzerland - Annual Meeting

Göttingen, Germany

DOMINIK C., VÁCLAVÍK T., HORGAN F.G., SETTELE J., SEPPELT R.

Sep. 2015

Talk: Effects of landscape structures on rice agroecosystem biodiversity and biological control across the Philippines.

FONA - Sustainable Land Management - Status Conference

Berlin, Germany

DOMINIK C., VÁCLAVÍK T., HORGAN F.G., SETTELE J., SEPPELT R.

Apr. 2013

Talk: The effects of landscape heterogeneity on the biocontrol-production function in the rice-dominated agroecosystems.

PROJECT'S ANNUAL GENERAL MEETINGS (AGM)

Safeguard - AGM 2024

Padua, Italy

DOMINIK C., MICHALSKI S., & SCHWEIGER O.

Feb. 2024

PoshBee - AGM 2023

Rome, Italy

DOMINIK C., WUBET T. & SCHWEIGER O.

Mar. 2023

Safeguard - AGM 2023

Sofia, Bulgaria

DOMINIK C., MICHALSKI S., & SCHWEIGER O.

Mar. 2023

Safeguard - AGM 2022

Online

DOMINIK C., MICHALSKI S., & SCHWEIGER O.

Jan. 2022

PoshBee - AGM 2021

Online

DOMINIK C., & SCHWEIGER O.

Jan. 2021

PoshBee - AGM 2020

Marseille, France

DOMINIK C., & SCHWEIGER O.

Jan. 2020

LEGATO - AGM 2016

Banau, Philippines

DOMINIK C., HORGAN F.G., SETTELE J., SEPPELT R., VÁCLAVÍK T.

Aug. 2016

LEGATO - AGM 2015

Yogyakarta, Indonesia

DOMINIK C., VÁCLAVÍK T., HORGAN F.G., SETTELE J., SEPPELT R.

Mar. 2015

LEGATO - AGM 2013

Hanoi, Vietnam

DOMINIK C., VÁCLAVÍK T., HORGAN F.G., SETTELE J., SEPPELT R.

Feb. 2013

Research Grants, Funding, and Prize

RESEARCH GRANTS AND FUNDING

Total funding acquired: 50.6k EUR

iDiv Flexpool Support Fund call CONSUMABLES FOR PATHOGEN SCREENING, IPATHOTELS PROJECT P.I.	7.5k EUR 2024
iDiv Flexpool Support Fund call CONSUMABLES FOR PATHOGEN SCREENING, IPATHOS PROJECT P.I.	10k EUR 2023
Helmholtz-Zentrum für Umweltforschung (UFZ) TB Support Fund CONSUMABLES FOR GUT MICROBIOME ANALYSES P.I.	8k EUR 2022
Helmholtz-Zentrum für Umweltforschung (UFZ) TB Support Fund PERSONNEL (HiWi & RESEARCH ASSISTANT) Co-P.I.	9.6k EUR 2022
iDiv Flexpool Support Fund call CONSUMABLES FOR GUT MICROBIOME, PATHOGEN & IMAGING FLOW CYTOMETRY ANALYSES, INTERACT PROJECT P.I.	10k EUR 2021
Helmholtz-Zentrum für Umweltforschung (UFZ) TB Support Fund CONSUMABLES FOR GUT MICROBIOME, PATHOGEN & IMAGING FLOW CYTOMETRY ANALYSES, INTERACT PROJECT P.I.	5k EUR 2021
Helmholtz-Zentrum für Umweltforschung (UFZ) TB PhD consortium INTERCEDE PROJECT Co-P.I. AND WP LEADER	Three PhD positions 2019
HIGRADE funding EXTERNAL COURSE AND TRAVEL COSTS	500 EUR 2014

PRIZE

Helmholtz-Zentrum für Umweltforschung (UFZ) PERFORMANCE BONUS FOR SPECIAL ACHIEVEMENTS	2k EUR 2022
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 Professional Activities and Memberships

RESEARCH PROJECTS

 ANTENNA : Making technology work for monitoring pollinators INVOLVED SCIENTIST	Biodiversa+ 2024 - present
 WildPosh : Pan-European assessment, monitoring, and mitigation of chemical stressors on the health of wild pollinators INVOLVED SCIENTIST	Horizon Europe 2024 - present
 RestPoll : Restoring Pollinator habitats across European agricultural landscapes based on multi-actor participatory approaches INVOLVED SCIENTIST	Horizon Europe 2023 - present
 MAMBO : Modern approaches to the monitoring of biodiversity INVOLVED SCIENTIST	Horizon Europe 2022 - present
 Safeguard : Safeguarding European wild pollinators INVOLVED SCIENTIST	Horizon 2020 2021 - present
INTERACT : Impacts of landscape structure, floral resources, and land-use intensity on the health of beneficial arthropods in agroecosystems PRINCIPAL INVESTIGATOR	iDiv and UFZ support funds 2021
 INTERCEDE : Interactions of farmland biodiversity and agricultural ecosystem services under climate change Co-P.I. AND WP LEADER	UFZ 2020 - 2023
 VOODOO : Viral eco-evolutionary dynamics of wild and domestic pollinators under global change INVOLVED SCIENTIST	BiodivERsA 2020 - 2023
 PoshBee : Pan-European assessment, monitoring, and mitigation of stressors on the health of bees INVOLVED SCIENTIST	Horizon 2020 2019 - 2023
 LEGATO : Land-use intensity and ecological engineering - Assessment tools for risks and opportunities in irrigated rice based production systems INVOLVED SCIENTIST, PHD STUDENT	BMBF 2011 - 2016

ECOSAL-ATLANTIS : Ecotourism in the Atlantic salt-marshes: a strategy for integral and sustainable development

INVOLVED UNDERGRADUATE, MASTER STUDENT

INTERREG

2007 - 2013

ORGANISATION ACTIVITIES

CONFERENCES

- MAMBO (Horizon Europe) AGM 2024

CO-ORGANISER

Leipzig, Germany

Sep. 2024

- ANTENNA (Biodiversa+) Kick-off meeting 2024

CO-ORGANISER

Leipzig, Germany

Mar. 2024

- GfÖ Annual Meeting 2023: Biodiversity monitoring using digital methods and artificial intelligence: shared challenges and opportunities

SESSION CO-CHAIR

Leipzig, Germany

Sep. 2023

WORKSHOPS

- Safeguard (Horizon 2020) synthesis workshop

CO-ORGANISER

Leipzig, Germany

Feb. 2023

- UFZ TB1-IP1 PhD Day

CO-ORGANISER

Leipzig, Germany

Nov. 2022

EVENTS

- Lange Nacht der Wissenschaften

CO-ORGANISER

Halle, Germany

Jul. 2019, 2022

PEER-REVIEWS

Journals N = 37 completed reviews of 26 manuscripts

Landscape Ecology (12), Agriculture Ecosystems & Environment (7), Paddy and Water Environment (3), Journal of Applied Ecology (3), Ecology and Evolution (2), BMC Ecology (2), Basic and Applied Ecology (2), Philosophical Transactions of the Royal Society B (2), Environmental Research Letters (1), Journal of Insect Conservation (1), Insects (1), Scientific Reports (1).

Proposals iDiv Flexpool (3).

Theses Master (4), Bachelor (1).

PROFESSIONAL MEMBERSHIPS

iDiv associate member (**iDiv**), Gesellschaft für Ökologie (**GfÖ**).

Professional Outreach

MEDIA INTERVIEWS

Viren bedrohen die Welt der Insekten

 LINK TO THE ARTICLE

MDR Sachsen

Jul. 2020

PRESS & BLOGS

Bees are still being harmed despite tightened pesticide regulations

 LINK TO THE ARTICLE

ScienceDaily

Nov. 2023

Better many small than a few large: how landscape configuration affects arthropod communities in rice agroecosystems

 LINK TO THE ARTICLE

The Applied Ecologist's Blog

Aug. 2018

Professional Supervision

PHD STUDENTS

Hamilton Murray, Martin Luther University Halle-Wittenberg, Germany

| Co-supervisor

2024 - present

MODERN TECHNOLOGIES FOR BUMBLE BEE MONITORING

Wogram Simon, Martin Luther University Halle-Wittenberg, Germany

| Co-supervisor

2023 - present

MODERN TECHNOLOGIES FOR POLLINATOR MONITORING

Heuschele Jonna M. , Martin Luther University Halle-Wittenberg, Germany <i>Main supervisor</i> THE EFFECTS OF LANDSCAPE HETEROGENEITY AND CROP DIVERSITY ON BIOLOGICAL PEST CONTROL AND POLLINATOR HEALTH	2020 - present
Liu Yicong , Martin Luther University Halle-Wittenberg, Germany <i>Co-supervisor</i> POLLINATOR-PLANTS TRAIT MATCHING; POLLEN AND NECTAR QUALITY; LAND-USE EFFECTS ON NETWORKS RESILIENCE	2020 - present

MASTER STUDENTS

Feldmann Noah , Martin Luther University Halle-Wittenberg, Germany <i>Main supervisor</i> EFFECTS OF TRAFFIC, FLORAL RESOURCES, AND LANDSCAPE STRUCTURE ON POLLINATOR COMMUNITIES  LINK TO THE PDF	2023 - 2024
Wogram Simon , Martin Luther University Halle-Wittenberg, Germany <i>Main supervisor</i> DRIVERS OF POLLEN LIMITATION IN <i>Scabiosa ochroleuca</i> : RELATIVE IMPORTANCE OF ENVIRONMENTAL FACTORS AT LOCAL, SITE AND LANDSCAPE SCALES  LINK TO THE PDF	2022 - 2023
Leyrer Dorothea , Friedrich Wilhelm University of Bonn, Germany <i>Main supervisor</i> THE EFFECTS OF LANDSCAPE STRUCTURE, FLORAL RESOURCES, AND LAND-USE INTENSITY ON THE FORAGING BEHAVIOUR AND COLONY PERFORMANCE OF BUMBLEBEES  LINK TO THE PDF	2021 - 2022
Slivensky-Graf Cassidy , University of Bremen, Germany <i>Main supervisor</i> THE EFFECTS OF LANDSCAPE STRUCTURE AND LAND-USE INTENSITY ON THE GUT BACTERIAL COMMUNITIES OF <i>Poecilus cupreus</i> AND <i>Anchomenus dorsalis</i> (COLEOPTERA: CARABIDAE)  LINK TO THE PDF	2021 - 2024

BACHELOR STUDENTS

Priese Carlotta , Weihestephan-Triesdorf University, Germany <i>Co-supervisor</i>	2020 - 2021
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Professional Skills

General: Experience in leading and managing interdisciplinary projects, and in supervising staff, doctoral and master students.
 Practical experience in experimental design, field sampling, and statistical analyses.

Software: R, ArcGIS 3.1/9/10/Pro, Fragstats, Adobe CS5, Markdown, GitHub.

Statistical analyses: ANOVA, LM/LME/GLS/GLM/GLMM, dissimilarity matrices, RLQ, 4th-corner, SEM.

Sampling methods: Sweep-net, suction sampler (blow-vac), capture-mark-recapture, pitfall traps, color plates, exclusion nets, point counts.

Pollinators: Pollinator-plant networks, camera trapping, haemolymph/nectar extraction, colony performance and fitness assessment.
 Bumblebee colony performance and set-up, pollen collection.

Fauna identification: Tropical Asian rice-arthropods, European arthropods: hemipteran, heteropteran, lepidopteran, Bombus.
 European passerine birds, tropical passerine birds (La Réunion Island).

Languages: French (Mother tongue), English (Proficient), German (B1).

Publications

PEER-REVIEW ARTICLES

First author: 5/17 (30 %)
 Corresponding author: 12/17 (70 %)

† These authors contributed equally to the manuscript

2024

- [17] Liu Y., Dunker S., Durka W., **Dominik C.**, ..., & Schweiger O. (2024). Eco-evolutionary processes shaping floral nectar sugar composition. **Scientific Reports** 14, 13856.
<https://doi.org/10.1038/s41598-024-64755-5>
- [16] Sponsler D., **Dominik C.**, Biegerl C., Honchar H., Schweiger O. & Steffan-Dewenter I. (2024). High rates of nectar depletion in summer grasslands indicate competitive conditions for pollinators. **Oikos**, e10495.
<https://doi.org/10.1111/oik.10495>

- [15] Maurer C., Martínez-Núñez C., **Dominik C.**, ..., & Albrecht M. (2024). Landscape simplification leads to loss of plant-pollinator interaction diversity and flower visitation frequency despite buffering by abundant generalist pollinators. **Diversity and Distributions**, 00, e13853. <http://doi.org/10.1111/ddi.13853>
- [14] Askri D., Pottier M., Arafah K., ..., **Dominik C.**, ..., & Bulet P. (2024). A blood test to monitor bee health across a European network of agricultural sites of different land-use by MALDI BeeTyping mass spectrometry. **Science of the Total Environment**, 172239. <https://doi.org/10.1016/j.scitotenv.2024.172239>
- [13] Laurent M., Bougeard S., Caradec L., ..., **Dominik C.**, ..., & Chauzat M.P. (2024). Novel indices reveal that pollinator exposure to pesticides varies across biological compartments and crop surroundings. **Science of the Total Environment**, 927:172118. <https://doi.org/10.1016/j.scitotenv.2024.172118>
- [12] Babin A., Schurr F., Delannoy S., ..., **Dominik C.**, ..., & Dubois E. (2024). Distribution of infectious and parasitic agents among three sentinel bee species across European agricultural landscapes. **Scientific Reports**, 14 (1), 3524. <http://dx.doi.org/10.1038/s41598-024-53357-w>
- [11] Nicholson C.[†], Knapp J.[†], Kiljanek T., ..., **Dominik C.**, ..., & Rundlöf M. (2024). Agricultural pesticide use negatively affects bumblebee colonies across Europe. **Nature**, 1-4. <https://doi.org/10.1038/s41586-023-06773-3>

2023

- [10] Høye T.T., August T., Banzan Mario V., ..., **Dominik C.**, ..., & Stowell S. (2023). Modern Approaches to the Monitoring of Biodiversity (MAMBO). **Research Ideas and Outcomes**, 9: e116951. <https://doi.org/10.3897/rio.9.e116951>
- [9] Bottero I.[†], **Dominik C.**[†], Schweiger O.[†], ..., & Stout J. (2023). Impact of landscape configuration and composition on pollinator communities across different European biogeographic regions. **Frontiers in Ecology and Evolution**, 11:309. <https://doi.org/10.3389/fevo.2023.1128228>

2022

- [8] Hodge S., Schweiger O., Klein A.M., ..., **Dominik C.**, ..., & Stout J. (2022). Design and planning of a transdisciplinary investigation into farmland pollinators: rationale, co-design, and lessons learned. **Sustainability**, 14(17), 10549. <https://doi.org/10.3390/su141710549>
- [7] Gérard M., Baird E., Breeze T., **Dominik C.**, & Michez D. (2022). Impact of crop exposure and agricultural intensification on the phenotypic variation of bees. **Agriculture, Ecosystems & Environment**, 338. <https://doi.org/10.1016/j.agee.2022.108107>
- [6] **Dominik C.**, Seppelt R., Horgan F.G., Settele J., & Václavík T. (2022). Landscape heterogeneity filters functional traits of rice arthropods in tropical agroecosystems. **Ecological Applications**, e2560. <https://doi.org/10.1002/eap.2560>

2021

- [5] Vanderplanck M., Michez D., Albrecht M., ..., **Dominik C.**, ..., & Gérard M. (2021). Monitoring bee health in European agro-ecosystems using wing morphology and fat bodies. **One Ecosystem** 6: e63653. <https://doi.org/10.3897/oneeco.6.e63653>

≤ 2018

- [4] Settele J., Heong K.L., Kühn I., ..., **Dominik C.**, ..., & Wiemers M. (2018). Rice Ecosystem Services in South-East Asia. **Paddy and Water Environment**, 16: 211-214. <https://doi.org/10.1007/s10333-018-0656-9>
- [3] **Dominik C.**, Seppelt R., Horgan F.G., Settele J., & Václavík T. (2018). Landscape composition, configuration, and trophic interactions shape arthropod communities in rice agro-ecosystems. **Journal of Applied Ecology**, 55: 2461-2472. <https://doi.org/10.1111/1365-2664.13226>
- [2] **Dominik C.**, Seppelt, R., Horgan F.G., Marquez L., Settele J., & Václavík T. (2017). Regional-scale effects override the influence of fine-scale landscape heterogeneity on rice arthropod communities. **Agriculture, Ecosystems & Environment**, 246: 269–278. <https://doi.org/10.1016/j.agee.2017.06.011>
- [1] **Dominik C.**, Ménanteau L., Chadenas C., & Godet L. (2012). The influence of salina landscape structures on terrestrial bird distribution in the Guérande basin (Northwestern France). **Bird Study**, 59: 483- 495. <https://doi.org/10.1080/00063657.2012.715279>

IN REVIEW/PREPARATION

- [8] Marion L. et al. (*in preparation*)
- [7] Wyver C. et al. (*in preparation*)
- [6] Lanuza J.B. et al. (*in preparation*)
- [5] Tourbez C. et al. (*in preparation*)

- [4] Heuschele J.M. et al. (*in review*)
- [3] **Dominik C.** et al. (*in preparation*)
- [2] Radermacher N. et al. (*in preparation*)
- [1] Dietenberger M. et al. (*in preparation*)

THESES

- [2] **Dominik C. (2019).** The effects of landscape heterogeneity on arthropod communities in rice agro-ecosystems. Doctoral Thesis, Martin-Luther-Universität Halle-Wittenberg.
 [Link to the PDF](http://dx.doi.org/10.25673/13861) <http://dx.doi.org/10.25673/13861>
- [1] **Dominik C. (2011).** Influence des structures spatiales des marais salants sur les communautés d'oiseaux terrestres. Master Thesis, Université de La Réunion.
 [Link to the PDF](#)