# Christophe Dominik

Theodor-Lieser-Strasse 4, 06120 Halle, Germany

🗷 christophe.dominik@ufz.de | 🏕 Homepage | 🞓 Google Scholar | 🖪 ResearchGate | 🕦 Publons | 💆 Twitter | 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 arthropods 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

Saint-Denis, Réunion Island

Nancy, France

2009

Université de La Réunion MASTER OF SCIENCE IN BIODIVERSITY AND TROPICAL ECOSYSTEMS

Université Henri-Poincaré (UHP Nancy-1)

BACHELOR OF SCIENCE IN BIOLOGY OF ORGANISMS AND POPULATIONS

# **Research Experience**

#### Helmholtz-Zentrum für Umweltforschung (UFZ)

Halle (Saale), Germany

Jan. 2019 - present

POSTDOCTORAL RESEARCHER | DEPARTMENT OF COMMUNITY ECOLOGY (BZF)

P.I.: Schweiger O. | Main projects: PoshBee, VOODOO, INTERCEDE, iNTERACT, Safeguard, MAMBO

- 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 two third-party funded projects iNTERACT, iPATHOS.
- 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)

Leipzig, Germany Jul. 2012 - Dec. 2018

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

PhD Thesis: The effects of landscape heterogeneity on arthropod communities in rice agro-ecosystems. 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)

Los Baños Laguna, Philippines

Jun. 2013 - Sep. 2014

GUEST SCIENTIST | CROP AND ENVIRONMENTAL SCIENCES DIVISION (CESD) 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)

Nantes, France Mar. 2012 - Jun. 2012

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

Supervisor: Godet L. | Main project: ECOSAL ATLANTIS

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

AUGUST 1, 2023

#### Centre national de la recherche scientifique (CNRS)

Nantes, France

Undergraduate Research student | Littoral, Environnement, Géomatique, Télédétection (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

• Material/Methods and analysis 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 | PEUPLEMENTS 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 C.janthina.
- Daily survival monitoring and GLM analysis to test the food specificity of C.janthina on Rosacea plants.

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## **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 Sep. 2018

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

3cp. 2010

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)**

PoshBee - AGM 2023 Rome, Italy

**DOMINIK C.**, WUBET T. & SCHWEIGER O.

Mar. 2023

Safeguard - AGM 2023

Sofia, Bulgaria Mar. 2023

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

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Safeguard - AGM 2022

Online

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

Juii. 2022

PoshBee - AGM 2021

Online

**DOMINIK C.**, & SCHWEIGER O.

Marseille, France

PoshBee - AGM 2020

Dominik C., & Schweiger O.

**LEGATO - AGM 2013** 

Jan. 2020

LEGATO - AGM 2016

Banaue, Philippines

Yogyakarta, Indonesia

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

Aug. 2016

LEGATO - AGM 2015

Mar. 2015

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

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: 43.1k EUR

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

#### **PRIZE**

 Helmholtz-Zentrum für Umweltforschung (UFZ)
 2k EUR

 Performance bonus for special achievements
 2022

Professional Activities and Memberships.

WildPosh: Pan-European assessment, monitoring, and mitigation of chemical stressors on the health of

**INTERACT**: Impacts of landscape structure, floral resources, and land-use intensity on the health of

# RESEARCH PROJECTS

wild pollinators INVOLVED SCIENTIST Accepted RestPoll: Restoring Pollinator habitats across European agricultural landscapes based on multi-actor Horizon Europe participatory approaches INVOLVED SCIENTIST Accepted MAMBO: Modern approaches to the monitoring of biodiversity Horizon Europe INVOLVED SCIENTIST 2022 - present ☑ Safeguard : Safeguarding European wild pollinators Horizon 2020 INVOLVED SCIENTIST 2021 - present

Horizon Europe

beneficial arthropods in agroecosystems

PRINCIPAL INVESTIGATOR

iDiv and UFZ support funds

2021

☐ INTERCEDE: Interactions of farmland biodiversity and agricultural ecosystem services under climate change

WP LEADER AND CO-P.I.

2020 - 2023

VOODOO: Viral eco-evolutionary dynamics of wild and domestic pollinators under global change

BiodivERSA

Involved scientist

2020 - 2023

✓ PoshBee : Pan-European assessment, monitoring, and mitigation of stressors on the health of beesHorizon 2020INVOLVED SCIENTIST2019 - 2023

**□ LEGATO**: Land-use intensity and ecological engineering - Assessment tools for risks and opportunities in irrigated rice based production systems

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

### District Control of the Atlantic Salt-marshes in the Atlantic Salt-marshes

Involved undergraduate, Master student 2007 - 2013

#### **ORGANISATION ACTIVITIES**

Workshop: Safeguard synthesis workshop

CO-ORGANIZER

Leipzig, Germany

Feb. 2023

Workshop: UFZ TB1-IP1 PhD Day

CO-ORGANIZER

Leipzig, Germany Nov. 2022

Event: Lange Nacht der Wissenschaften

Halle, Germany Jul. 2019, 2022

Co-organizer

#### PEER-REVIEWS

**Journals** N = 36 completed reviews of 25 manuscripts

Landscape Ecology (12), Agriculture Ecosystems & Environment (7), Paddy and Water Environment (3), Journal of Applied Ecology (2), 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).

#### **PROFESSIONAL MEMBERSHIPS**

iDiv associate member (iDiv), Gesellschaft für Ökologie (GfÖ), Société Française d'Écologie (SFE).

## ■ Professional Outreach

#### **MEDIA INTERVIEWS**

Viren bedrohen die Welt der Insekten

☐ LINK TO THE ARTICLE

MDR Sachsen

Jul. 2020

**PRESS & BLOGS** 

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

The Applied Ecologist's Blog

☑ LINK TO THE ARTICLE

Aug. 2018



# **Professional Supervision**

#### **PHD STUDENTS**

Heuschele Jonna, Martin Luther University Halle-Wittenberg, Germany | Main supervisor 2020 - present
The effects of Landscape Heterogeneity and crop diversity on Biological Pest Control and Pollinator Health

**Liu Yicong,** Martin Luther University Halle-Wittenberg, Germany

Co-supervisor

POLLINATOR-PLANTS TRAIT MATCHING; POLLEN AND NECTAR QUALITY; LANDUSE EFFECTS ON NETWORKS RESILIENCE

#### **MASTER STUDENTS**

**Feldmann Noah,** Martin Luther University Halle-Wittenberg, Germany

Main supervisor

2023 - present

EFFECTS OF TRAFFIC, FLORAL RESOURCES, AND LANDSCAPE STRUCTURE ON POLLINATOR COMMUNITIES

Wogram Simon, Martin Luther University Halle-Wittenberg, Germany

Main supervisor

2022 - 2023

POLLINATOR MOVEMENT AND PLANT REPRODUCTION ALONG MULTIPLE LANDSCAPE GRADIENTS

LINK TO THE PDF

**Leyrer Dorothea,** Friedrich Wilhelm University of Bonn, Germany

Main supervisor

2021 - 2022

THE EFFECTS OF LANDSCAPE STRUCTURE, FLORAL RESOURCES AND LAND-USE INTENSITY ON THE FORAGING BEHAVIOUR AND

COLONY PERFORMANCE OF BUMBLEBEES

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Slivensky Cassidy, University of Bremen, Germany

Main supervisor

2021 - 2023

THE EFFECTS OF LANDSCAPE STRUCTURE AND DIET ON THE HEALTH OF CARABIDS IN OSR DOMINATED LANDSCAPES

#### **BACHELOR STUDENTS**

**Priese Carlotta,** Weihenstephan-Triesdorf University, Germany

Co-supervisor

2020 - 2021

## 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 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: 5/9 (55.5 %)
Last author: 0/9 (0 %)
Corresponding author: 4/9 (44.5 %)

- <sup>†</sup> These authors contributed equally to the manuscript
- [9] Bottero I.<sup>†</sup>, **Dominik C.**<sup>†</sup>, Schweiger O.<sup>†</sup>, ..., & 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

- [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

- [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
- [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 arthopod 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

- [10] Laurent M. et al. Newly created indices reveal that pollinators are differently exposed to pesticides depending on crop surroundings at European level. *(in preparation)*
- [9] Heuschele J. et al. Seasonal dynamics of flower-visitor networks are mediated by spatio-temporal resource availability. (in preparation)

- [8] Maurer C. et al. Abundant generalist pollinators prevent a rapid decline in interaction diversity upon landscape simplification. (submitted in Ecology Letters)
- [7] Liu Y. et al. Disentangling the impacts of coadaptation according to pollinator dietary demands, flower morphology, and 'other' phylogenetic constraints. (submitted in Functional Ecology)
- [6] **Dominik C.** et al. Towards a better understanding of bee health: Effects of multiple environmental pressures on the gut microbiome of Bombus terrestris across a pan-European site network (*in preparation*)
- [5] Radermacher N. et al. Variation in the diet of spiders in rice paddy ecosystems of different landscape complexity depends on species identity and hunting strategy (in preparation)
- [4] Nicholson C. et al. Agricultural pesticide use negatively affects bumblebee colonies across Europe (in review in Nature)
- [3] Askri D. et al. Monitoring bee health in natural environment in two-mass flowering crops by blood test using MALDI BeeTyping® mass spectrometry (to be submitted in Science of the Total Environment)
- [2] Babin A. et al. Another brick in the wall: spillover of infectious and parasitic agents between bee species in a pan-European assessment (submitted in Scientific Reports)
- [1] Dietenberger M. et al. Effects of multiple habitat types and landscape composition on trap-nesting bees, wasps and their natural enemies in a gradient of land use (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
- [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