

Christophe Dominik

POSTDOCTORAL RESEARCHER

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10.11.1985 | French nationality



Summary

Practical experience in landscape ecology, agroecology, community ecology and ecosystem services. 10+ years experience in geographical information systems (GIS) and statistical software (R). 5+ year experience in field work and identification of arthropods. 1+ year abroad work experience (Philippines). Strong interests in landscape ecology, macroecology, pollination services, biological control, community ecology, gut microbiome, R 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, 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 funded projects iINTERACT, 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)

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 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)

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 identification of arthropods (~ 80000 individuals) to morphospecies level (~ 200 morphospecies).
- Supervision of field work 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 a two weeks period.
- 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

- 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 | 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 *C.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., ..., DOMINIK C., ..., 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)

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: 43.1k EUR

iDiv Flexpool Support Fund call

CONSUMABLES FOR PATHOGEN SCREENING, IPATHOS | 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 ANALYSES, PATHOGEN SCREENING, AND IMAGING FLOW CYTOMETRY, INTERACT | P.I.

10k EUR

2021

Helmholtz-Zentrum für Umweltforschung (UFZ) TB Support Fund

CONSUMABLES FOR GUT MICROBIOME ANALYSES, PATHOGEN SCREENING, AND IMAGING FLOW CYTOMETRY, INTERACT | 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



Professional Activities and Memberships

RESEARCH PROJECTS

RestPoll : Restoring Pollinator habitats across European agricultural landscapes based on multi-actor participatory approaches

INVOLVED SCIENTIST

Horizon Europe

Accepted

 **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

WP LEADER AND CO-P.I.

UFZ

2020 - 2023

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

INVOLVED SCIENTIST

BiodivERsA


2020 - present

 **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

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

CO-ORGANIZER

Halle, Germany

Jul. 2019, 2022

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 (2).

PROFESSIONAL MEMBERSHIPS

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

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

 [LINK TO THE ARTICLE](#)

The Applied Ecologist's Blog

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*

2020 - present

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

MASTER STUDENTS

Wogram Simon, Martin Luther University Halle-Wittenberg, Germany | *Main supervisor*

2022 - present

POLLINATOR MOVEMENT AND PLANT REPRODUCTION ALONG MULTIPLE LANDSCAPE GRADIENTS

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

 [LINK TO THE PDF](#)

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, Weihestephan-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 %)

† These authors contributed equally to the manuscript


- [9] Bottero I.†, **Dominik C.**†, Schweiger O.†, ..., & Stout J. (2023). Impact of landscape configuration and composition on pollinator communities across different European biogeographic regions (**accepted in *Frontiers In Ecology And Evolution***)
- [8] Hodge S., Schweiger O., Klein A.M., ..., **Dominik C.**, ..., Brown M., & 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.**, ..., Toktas Y., & 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.**, ..., Zhu Z., & 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

- [7] Liu Y., ..., **Dominik C.**, & Schweiger O. Disentangling the impacts of coadaptation according to pollinator dietary demands, flower morphology, and ‘other’ phylogenetic constraints. (**in preparation**)
- [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 (**to be submitted in Scientific Reports**)

- [1] Diätenberger 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.
<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](#)