

# Christophe Dominik

POSTDOCTORAL RESEARCHER

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10.11.1985 | Married



## 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, biological control, pollination services, gut microbiome, community ecology, ecosystem services, 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, VOODOO, INTERCEDE, INTERACT, Safeguard

- 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 a third funded project iNTERACT.
- 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

Supervisors: Seppelt R. and Václavík T. | 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 species).
- 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

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

#### 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)

#### Safeguard - AGM

Online

DOMINIK C., & SCHWEIGER O.

Jan. 2022

**Talk:** Introduction on how to analyse the impact of landscape structure on pollinator movement and plant reproduction

#### PoshBee - AGM

Online

DOMINIK C., & SCHWEIGER O.

Jan. 2021

**Talk:** Can we predict pesticide application within the PoshBee site network?

#### PoshBee - AGM

Marseille, France

DOMINIK C., & SCHWEIGER O.

Jan. 2020

**Talk:** Characterization of the landscape structure within the site network: update, status, and next steps

#### LEGATO - AGM

Banaue, Philippines

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

Aug. 2016

**Talk:** The effects of landscape heterogeneity on arthropod communities in rice agro-ecosystems.

#### LEGATO - AGM

Yogyakarta, Indonesia

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

Mar. 2015

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

#### LEGATO - AGM

Hanoi, Vietnam

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

Feb. 2013

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

## Research Grants and Funding

### iDiv Flexpool Support Fund call

10k EUR

CONSUMABLES FOR GUT MICROBIOME ANALYSES, PATHOGEN SCREENING, AND IMAGING FLOW CYTOMETRY | P.I.

2021

### UFZ TB Support Fund

5k EUR

CONSUMABLES FOR GUT MICROBIOME ANALYSES, PATHOGEN SCREENING, AND IMAGING FLOW CYTOMETRY | P.I.

2021

### UFZ TB PhD consortium

Three PhD positions

INTERCEDE PROJECT | CO-P.I. AND WP LEADER

2019



## Professional Activities and Memberships

### RESEARCH PROJECTS

**Safeguard** : Safeguarding European wild pollinators

INVOLVED SCIENTIST

*Horizon 2020*

2021 - present

**iINTERACT**: 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 - present

**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 - present

**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

### PEER-REVIEWS

Journals N = 34 completed reviews of 25 manuscripts

Landscape Ecology (12), Agriculture Ecosystems & Environment (5), 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**), British Ecological Society (**BES**), 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*

[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*

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 | *Co-supervisor*

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

2020 - present

## MASTER STUDENTS

<b>Wogram Simon</b> , Martin Luther University Halle-Wittenberg, Germany	Co-supervisor	2022 - present
POLLINATOR MOVEMENT AND PLANT REPRODUCTION ALONG MULTIPLE LANDSCAPE GRADIENTS		
<b>Leyrer Dorothea</b> , Friedrich Wilhelm University of Bonn, Germany	Main supervisor	2021 - 2022
THE EFFECTS OF LANDSCAPE STRUCTURE, FLORAL RESOURCES AND DIET ON THE FORAGING BEHAVIOUR AND COLONY PERFORMANCE OF BUMBLEBEES		
<b>Slivensky Cassidy</b> , University of Bremen, Germany	Main supervisor	2021 - 2022
THE EFFECTS OF LANDSCAPE STRUCTURE AND DIET ON THE HEALTH OF CARABIDS IN OSR DOMINATED LANDSCAPES		

## BACHELOR STUDENTS

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

**General:** Experience in leading and managing multiple 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), pitfall traps, color plates, exclusion nets, point counts.

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

**Fauna identification:** Tropical 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: 4/6 (67 %)
- Last author: 0/6 (0 %)

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., & Maxence G. (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

1. Gérard M., Baird E., Breeze T., **Dominik C.**, & Michez D. Impact of crop exposure and agricultural intensification on the phenotypic variation of bees. *(in revisions)*

## 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 thesis](#)