

JASPER VAN DONINCK

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° Vilvoorde, 27 March 1979
Belgian nationality

PROFESSIONAL EXPERIENCE

- 2020 – **Michigan State University**, East-Lansing, MI, USA
Research Associate
Spatial & Community Ecology Lab
Department of Integrative Biology
- 2014 – 2020 **University of Turku**, Turku, Finland
Postdoctoral researcher
Amazon Research Team
Department of Biology / Department of Geography and Geology
- 2013 – 2014 **Université catholique de Louvain**, Louvain-la-Neuve, Belgium
Postdoctoral researcher
George Lemaître Centre for Earth and Climate Research
Earth and Life Institute
- 2009 – 2013 **Ghent University**, Ghent, Belgium
Research assistant
Laboratory of Hydrology and Water Management
Department of Forest and Water Management
- 2004 – 2006, 2008 **Municipality of Grimbergen**, Belgium
Policy officer urban planning
Department of Environment and Urban Planning

EDUCATION

- 2009 – 2013 **Ghent University**, Ghent, Belgium
PhD of Applied Biological Sciences
Thesis: *Remotely sensed soil moisture proxies with application to modelling the spatial distribution of *Culicoides imicola**
- 2006 – 2008 **Katholieke Universiteit Leuven**, Leuven, Belgium / **Purdue University**, IN, USA
Advanced MSc in Earth Observation
Thesis: *Assessment of cropped areas in Ethiopia using soft classification of medium resolution imagery. Influence and integration of elevation data*
- 1997 – 2002 **Vrije Universiteit Brussel**, Brussels, Belgium
MSc in Geography
Thesis: *Sub-pixel classification of Landsat ETM+ data in urban areas*

PUBLICATIONS

Published and accepted

19. Pérez Chaves, P., Zuquim, G., Ruokolainen, K., **Van doninck, J.**, Kalliola, R., Gómez Rivero, E., Tuomisto, H. (early view) [Mapping floristic patterns of trees in Peruvian Amazonia using remote sensing and machine learning](#). *Remote Sensing*, 12.
18. Terraube, J., **Van doninck, J.**, Helle, P., Cabeza, M. (accepted) *Assessing the effectiveness of a national protected area network in maintaining carnivore populations*. *Nature Communications*.
17. Maximiano, M., d'Horta, F., Tuomisto, H., Zuquim, G., **Van doninck, J.**, Ribas, C. (early view) [The relative role of rivers, environmental heterogeneity and species traits in driving compositional changes in Southeastern Amazonian bird assemblages](#). *Biotropica*.
16. **Van doninck, J.**, Jones, M., Zuquim, G., Ruokolainen, K., Moulatlet, G., Sirén, A., Cárdenas, G.,

- Lehtonen, S., Tuomisto, H. (2020) [Multispectral canopy reflectance improves spatial distribution models of Amazonian understory species](#). *Ecography*, 43(1), 128-137.
15. Tuomisto, H., **Van doninck, J.**, Ruokolainen, K., Moulatlet, G.M., Figueiredo F.O.G., Sirén, A., Cárdenas, G., Lehtonen, S., Zuquim, G. (2019) [Discovering floristic and geocological gradients across Amazonia](#). *Journal of Biogeography*, 46(8), 1734-1748.
 14. Zuquim, G., Stropp, J., Moulatlet, G., **Van doninck, J.**, Quesada, C., Figueiredo, F., Costa, F., Ruokolainen, K., Tuomisto, H. (2019) [Making the most of scarce data: Mapping soil gradients in data-poor areas using species occurrence records](#). *Methods in Ecology and Evolution*, 10(60), 788-801.
 13. **Van doninck, J.**, Tuomisto, H. (2018) [A Landsat composite covering all Amazonia for applications in ecology and conservation](#). *Remote Sensing in Ecology and Conservation*, 4(3), 197-210.
 12. **Van doninck, J.**, Tuomisto, H. (2017) [Evaluation of directional normalization methods for Landsat TM/ETM+ over primary Amazonian lowland forests](#). *International Journal of Applied Earth Observation and Geoinformation*, 58, 249-263.
 11. **Van doninck, J.**, Tuomisto, H. (2017) [Influence of compositing criterion and data availability on pixel-based Landsat TM/ETM+ image compositing over Amazonian forests](#). *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10(3), 857-867.
 10. Muro, J., **Van doninck, J.**, Tuomisto, H., Higgins, M., Moulatlet, G., Ruokolainen, K. (2016) [Floristic composition and across-track reflectance gradient in Landsat images over Amazonian forests](#). *ISPRS Journal of Photogrammetry and Remote Sensing*, 119, 361-372.
 9. Vanwambeke, S., **Van doninck, J.**, Artois, J., Davidson, R., Meyfroidt, P., Jore, S. (2016) [Forest classes and tree cover gradient: tick habitat in encroached areas of southern Norway](#). *Experimental and Applied Acarology*, 68(3), 375-385.
 8. **Van doninck, J.**, De Baets, B., Peters, J., Hendrickx, G., Ducheyne, E., Verhoest, N. (2014) [Modelling the spatial distribution of *Culicoides imicola*: climatic versus remote sensing data](#). *Remote Sensing*, 6, 6604-6619.
 7. Peters, J., Waegeman, W., **Van doninck, J.**, Ducheyne, E., Calvete, C., Lucientes, J., Verhoest, N., De Baets, B. (2014) [Predicting spatio-temporal *Culicoides imicola* distributions based on environmental habitat characteristics and species dispersal](#). *Ecological Informatics*, 22, 69-80.
 6. **Van doninck, J.**, Wagner, W., Melzer, T., De Baets, B., Verhoest, N. (2014) [Seasonality in the angular dependence of ASAR Wide Swath backscatter](#). *IEEE Geoscience and Remote Sensing Letters*, 11(8), 1423-1427.
 5. Peters, J., Conte, A., **Van doninck, J.**, Verhoest, N., De Clercq, E., Goffredo, M., De Baets, B., Hendrickx, G., Ducheyne, E. (2014) [On the relation between soil moisture dynamics and the geographical distribution of *Culicoides imicola*](#). *Ecohydrology*, 7(2), 622-632.
 4. **Van doninck, J.**, Peters, J., Lievens, H. De Baets, B., Verhoest, N. (2012) [Accounting for seasonality in a soil moisture change detection algorithm for ASAR Wide Swath time series](#). *Hydrology and Earth System Sciences*, 16(3), 773-786.
 3. **Van doninck, J.**, Peters, J., De Baets, B., De Clercq, E., Ducheyne, E., Verhoest, N. (2012) [Influence of topographic normalization on the vegetation index-surface temperature relationship](#). *Journal of Applied Remote Sensing*, 6(1), 063518.
 2. **Van doninck, J.**, Peters, J., De Baets, B., De Clercq, E., Ducheyne, E., Verhoest, N. (2011) [The potential of multitemporal Aqua and Terra MODIS apparent thermal inertia as a soil moisture indicator](#). *International Journal of Applied Earth Observation and Geoinformation*, 13(6), 934-941.
 1. Peters, J., De Baets, B., **Van doninck, J.**, Calvete, C., Lucientes, J., De Clercq, E., Ducheyne, E., Verhoest, N. (2011) [Absence reduction in entomological surveillance data to improve niche-based distribution models for *Culicoides imicola*](#). *Preventive Veterinary Medicine*, 100(1), 15-28.

In review

4. **Van doninck, J.**, Westerholm, J., Ruokolainen, K., Tuomisto, H., Kalliola, R. (in review) [Dating flowering cycles of Amazonian bamboo-dominated forests using a supervised Landsat time series segmentation](#). *Journal of Applied Earth Observation and Geoinformation*.
3. Melo, T., Campos Cerqueira, M., d'Horta, F., Tuomisto, H., Van doninck, J., Ribas, C. (in review) [Changes in bird species composition due to the operation of a large hydroelectric dam on the Madeira River in Amazon](#). *Biotropica*.
2. Pérez Chaves, P., Ruokolainen, K., **Van doninck, J.**, Tuomisto, H. (in review) [Do older trees occupy smaller distributions? Modelling tree species distributions in Amazonia](#). *Biotropica*.
1. Pérez Chaves, P., Reategui Echeverri, N., Ruokolainen, K., Kalliola, R., **Van doninck, J.**, Gómez Rivero, E., Zuquim, G., Tuomisto, H. (in revision, major) [Using forestry inventories and satellite imagery to assess floristic and structural variation in bamboo-dominated forests in Peruvian Amazonia](#). *Journal of Vegetation Science*.

TEACHING

Co-lecturer

1919 Remote Sensing of Environment University of Turku

Guest lecturer

2018 Remote Sensing of Environment University of Turku

2018 Remote Sensing and GIS University of Turku

2017 Determinants of Species Distribution in Space and Time University of Turku

2016 Tropical Ecology University of Turku

2015 Biogeography of Tropical Forests University of Turku

Workshop lecturer

2017 Workshop Spatial Data Management and Analysis in R University of Turku

STUDENT THESIS SUPERVISION

2017 – 2018 Fatih Kayaanan, MSc in Biology, University of Turku

2009 – 2010 Thomas Timmerman, MSc in Bioscience Engineering, Ghent University

PUBLISHED SOFTWARE

R package [solarPos](#): Solar Position Algorithm for Solar Radiation Applications

R package [horizon](#): Horizon Search Algorithm

LANGUAGE SKILLS

Dutch Native proficiency

English Full professional proficiency

French Limited working proficiency

Spanish Elementary proficiency

Portuguese Elementary proficiency

FIELD CAMPAIGNS

2013 June, September
Southern Norway
Collection of ticks and reference land cover data

2009 September – October
Calabria, Italy
Collection of in situ soil moisture data

2007 September – October
Northern Ethiopia
Collection of data on agricultural landuse

GRANTS

2012 Special Research Fund (BOF) Ghent University, PhD grant, July 2012 – March 2013

SELECTED PRESENTATIONS

2017 "Identification of Amazonian bamboo patches and their flowering cycles" *9th International Workshop on the Analysis of Multitemporal Remote Sensing Images*, Bruges, Belgium.

"Mapping Amazonian biodiversity and geology from Landsat imagery and fern species inventories" *European Conference of Tropical Ecology*, Brussels, Belgium.

2016 "A seamless Landsat image mosaic for Amazonian vegetation mapping" *16th Nordic Meeting on Tropical Botany*, Turku, Finland.

"Generation of a Landsat image mosaic over the Amazon rainforest" *ForestSAT 2016*, Santiago, Chile.

"Mapping Amazonian biodiversity and geology using basin-wide fern species inventories and Landsat imagery" *ForestSAT 2016*, Santiago, Chile.

- 2015 "Landsat TM/ETM+ image compositing for Amazonian vegetation mapping" *8th International Workshop on the Analysis of Multitemporal Remote Sensing Images*, Annecy, France.
 "BRDF correction for Landsat TM/ETM+ data over Amazonian forests" *35th EARSeL Symposium*, Stockholm, Sweden.
- 2014 "Impact of changing land cover, observed by Landsat TM/ETM+, on tick habitat in Southern Norway" *EARSeL SIG LULC - NASA LCLUC Workshop*, Berlin, Germany.
- 2013 "Integrating vegetation phenology in soil moisture change detection from ASAR wide swath images" *ESA Living Planet Symposium*, Edinburgh, UK.
- 2012 "Identifying relevant remote sensing products for the spatial modelling of a bluetongue vector using Random Forests" *Belgian-Dutch conference on Machine Learning & Workshop on Predictive Modeling for the Life Sciences*, Ghent, Belgium.
 "Using remote sensing and machine learning for the spatial modelling of a bluetongue virus vector" *EGU General Assembly*, Vienna, Austria.
 "Multi-temporal angular correction of ASAR Wide Swath data and the influence of vegetation phenology" *EGU General Assembly*, Vienna, Austria.
- 2011 "Topographic normalization of thermal infrared data" *EGU General Assembly*, Vienna, Austria.
 "Soil moisture estimation from multitemporal ENVISAT ASAR Wide Swath images in mountainous terrain" *EGU General Assembly*, Vienna, Austria.
- 2010 "Soil moisture proxies from MODIS-derived apparent thermal inertia time series" *EGU General Assembly*, Vienna, Austria.