

# Dr Vladimir R. Wingate

Postdoctoral researcher, Land Systems and Sustainable Land Management  
University of Bern, Institute of Geography, Office 108, Hallerstrasse 12, 3012 Bern  
Phone +41 31 631 32 93, [Vladimir.wingate@unibe.ch](mailto:Vladimir.wingate@unibe.ch)

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## EDUCATION DETAILS

- 2013 – 2017**    **D.Phil. Geography, University of Basel**  
**Supervisors:** Prof Nicolaus Kuhn, Physical Geography and Environmental Change  
Prof Stuart Phinn, Remote Sensing Research Centre, University of Queensland (UQ)  
**Thesis Title:** [“Remote sensing environmental change in southern African savannahs: a case study of Namibia”](#)
- 2010 – 2011**    **Master of Science, Environmental Management, University of Stirling**  
**Research Projects:** 1) Development of a retrieval algorithm for phytoplankton pigment concentrations and mapping phytoplankton blooms, 2) NDVI and LiDAR for mapping changes in forest growth; **MSc Thesis:** “A novel combination of a portable OSL reader, 210Pb dating and X-Ray Fluorescence to develop an erosion and pollution history for an abandoned mine site, Spain”
- 2006 – 2010**    **BSc (Hons) Tropical Environmental Science, University of Aberdeen**  
**Research Project:** Crops Research Institute, Kumasi, Ghana  
**Research Project:** Madagasikara Voakajy Conservation NGO, Madagascar  
**Honours Project:** “Leaf traits in tropical rain forest trees: the influence of ontogeny and vertical light environment of two species with contrasting shade tolerances”
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## WORK EXPERIENCE

- Aug 2020 – Present    **Postdoctoral researcher, Land Systems and Sustainable Land Management, Institute of Geography, University of Bern** Research with a focus on tropical forest fragment mapping using remote sensing, developing change analyses to inform land management and provide quantitative data on global change processes. Lecture and conceivinh new courses on topics ranging from remote sensing to global change drivers.
- April 2019 – Jul 2020    **Postdoctoral researcher, Remote Sensing Laboratories, Department of Geography, University of Zurich** Consultant at the [National Point of Contact for Satellite Data \(NPOC\)](#); researcher with the European Space Agency (ESA) research project [GlobDiversity](#), which is aimed at engineering Remote Sensing-enabled Essential Biodiversity Variables in support of the efforts of the [Group on Earth Observations Biodiversity Observation Network](#) to monitor biological diversity of terrestrial ecosystems from space
- Jan 2019 – April 2019    **Postdoctoral researcher, Physical Geography and Environmental Change, University of Basel** [Swiss-South African Joint Research Programme](#), Swiss National Science Foundation grant: Source, timing and release mechanisms of cropland dust emissions: Sentinel 1-2, and, UAV and field measurements
- Jan 2018 – Jan 2019    **Postdoctoral researcher, University of Bonn & University of Cologne** [Collaborative Research Centre Future Carbon Storage project](#): i) producing thematic land cover change statistics, ii) evaluating trends in Landsat time-series, and ii) remote sensing and field measurements to map savannah vegetation biomass (Kavango-Zambezi Trans-frontier Conservation Area)

- Sept 2013 – Jan 2018 **PhD, Physical Geography and Environmental Change, University of Basel**  
A **key objective** was addressing the inherent complexities of remote sensing savannah vegetation, which varies due to climatic, environmental and anthropogenic disturbances, and distinct phenophases and gradients in plant functional types. **Outcomes** include journal articles on (i) change detection analyses using the full Landsat archive (ii) fusing optical, radar and field inventory data using empirical modelling to quantify biomass change, (iii) trends in woody cover using phenological metrics and field estimates, (iv) precipitation-vegetation dynamics using MODIS and precipitation time-series, and **on-going** work on (iv) merging Landsat and Sentinel for land surface phenology analysis, and (vi) near-surface (Phenocam) development
- Aug – Sept 2016 **Visiting Scholar, Centre of Ecology and Hydrology, Earth Observation group**  
Collaboration with Dr France Gerard head of the Earth Observation group, on remote sensing land surface phenology indicators in drylands
- Jun – Nov 2015 **Endeavour Fellowship, Remote Sensing Research Centre, UQ**  
Quantifying the extent and rate of land-cover change using forty years of Landsat satellite imagery
- Jul – Sept 2013 **GIS Analyst Placement, Redland City Council, Brisbane, Australia**  
Development of a GIS Geodatabase designed to provide an expression of Conservation Value within the Redland Local Government Agency boundary
- Mar – June 2013 **Technical Assistant, Commonwealth Scientific and Industrial Research Organization (CSIRO), Brisbane, Australia**  
Field assistant with CSIRO Ecosystem Sciences Insect Ecology department; landscape-scale monitoring of insect pest control
- Oct 2011 – Jan 2012 **Environmental Technician Pacific Environment Limited, Brisbane, Australia**  
Employed US Environmental Protection Agency (EPA) Methods for Emissions Monitoring across a range of process industries including smelters
- June – Sept 2011 **Research Assistant, Spatial Ecology Lab, University of Queensland**  
Quantifying patterns of intertidal habitat loss across the Australasian flyway to inform conservation management of declining shorebird populations
- Jan – May 2011 **Volunteer, Spatial Ecology Lab, University of Queensland**  
Introduction to ArcGIS 10 and a range of its tools; introduction to Landsat archive, access, downloading and management
- Nov – Jan 2011 **Field Assistant, University of Stirling, Scottish Env. Protection Agency**  
Assessing the presence of, and recovering Radium-226 particle contamination, using standard experimental protocols in field environment
- June – Sept 2009 **Research Assistant, University of Aberdeen, Madagasikara Voakajy Conservation NGO, Madagascar** Research Expedition Madagascar assessing illegal hunting of the protected species *Pteropus rufus*
- June – Sept 2008 **Internship, International Association for the Exchange of Students for Technical Experience (IAESTE) Crops Research Institute Kumasi, Ghana**  
Student intern in the tissue culture and biochemistry laboratories

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## LECTURING/TEACHING (UNIBE/ UZH)

10917 FS2022 Seminar Geography Seminar: Land Systems and Sustainable Land Management  
100671 HS2021 Course Geography Sustainability Forum - Persistence and Change of Forests  
100671 HS2023 Course Geography Sustainability Forum - Forests as social-ecological systems  
468196 FS2021 Course Geography Assessing and monitoring land surface dynamics  
468196 FS2023 Course Geography RS and social-ecological analysis of land surface dynamics  
100671 HS2023 Course Geography Sustainability Forum - Forests as social-ecological systems  
10917 FS2024 Seminar Geography Seminar: Land Systems and Sustainable Land Management  
GEO371 HS2019 Extracting multi-scale information using multi-sensor remote sensing  
GEO233 HS2019 Global Applications and Benefits of Remote Sensing

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## AWARDS, SCHOLARSHIPS and GRANTS

2023 Young Academics Open round support  
2023 Conference Support UNIBE  
2023 120% Care Grant Support for early career researchers with care duties  
2022 Conference Support UNIBE  
2021 Young Academics Open round support 2021  
2018 Reisefonds für den akademischen Nachwuchs der Universität Basel, conference  
2018 Zentrum für Afrikastudien Basel, conference  
2017 Reisefonds für den akademischen Nachwuchs der Universität Basel, conference  
2016 Reisefonds für den akademischen Nachwuchs der Universität Basel, conference  
2015 Reisefonds für den akademischen Nachwuchs der Universität Basel, conference  
2015 Swiss Geomorphological Society, PhD Field work  
2014 Freiwillige Akademische Gesellschaft, Basel, PhD Field work  
2014 Endeavour Research Fellowship, University of Queensland, PhD research  
2014 Freiwillige Akademische Gesellschaft, Basel, PhD field course, Denmark  
2013 Humer Foundation PhD Scholarship, Basel, doctoral degree  
2010 Postgraduate Students Awards Agency Studentship, Scotland, MSc degree  
2006 Undergraduate Students Awards Agency Studentship, Scotland, BSc degree

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## CONFERENCES

Nov 2023 Swiss Geoscience meeting 2023, Mendriso, CH (poster)  
Nov 2023 Swiss Sustainability Forum 2023, Bern, CH (poster)  
Jun 2022 WSL Symposium Koni Steffen 2022  
Jun 2022 World Biodiversity Forum, Davos, CH, (poster)  
Jun 2022 World Biodiversity Forum, Davos, CH, (poster)  
Nov 2021 Swiss Geoscience meeting 2020, Zurich, CH (virtual)  
Apr 2021 European Geoscience meeting EGU 2021 (presentation)  
Jul 2020 Open Science Conference and All Hands Meeting, Online (webinar)  
Feb 2020 World Biodiversity Forum, Davos, CH, (poster, workshop, presentation)  
Nov 2019 Swiss Geoscience meeting 2019, Fribourg, CH (presentation)  
Jul 2019 World Conference of Science Journalists, Lausanne, CH (presentation)  
May 2019 ESA Living Planet Symposium 2019, Milan, Italy (presentation)  
Dec 2018 Swiss Geoscience meeting 2018, (lab poster)  
May 2018 GeoPython 2018, Basel Switzerland (practical sessions)  
Jul 2017 International Congress on Conservation Biology, Cartagena (poster)  
Jun 2017 4th Oxford Interdisciplinary Desert Conference, Oxford (poster)  
Apr 2017 European Geoscience Union, Vienna (poster x2)  
Oct 2016 Swiss Geoscience meeting 2016 (presentation)  
Jun 2016 Society for Conservation Biology 4th Oceania Congress, Brisbane (poster)  
Apr 2015 European Geoscience Union, Vienna (poster)  
Dec 2015 Swiss Geoscience meeting 2015 (lab poster)

Oct 2015	<b>Deutschen Kongress für Geographie 2015</b> , Berlin (poster)
Sep 2015	<b>3rd Namibia Research Day 2015</b> , Basel (presentation)
Sep 2015	<b>5th World Sustainability Forum</b> , Basel (presentation)
Sep 2015	<b>2nd Namibia Research Day 2015</b> , Basel (presentation)
Dec 2014	<b>Swiss Geoscience meeting 2014</b> (lab poster)
Oct 2014	<b>Third Swiss Researching Africa Days 2014</b> , Bern (poster)
Sep 2014	<b>1st Namibia Research Day 2014</b> , Basel (presentation)

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## TRANSFERABLE SKILLS

<b>Programming</b>	Remote sensing and Earth Observation in R, Python and Google Earth Engine
<b>Software</b>	Word, Excel, PowerPoint, R, ArcGIS, QGIS, IDRISI, ENVI, Python, TIMESAT, Pix4D, Adobe InDesign, Adobe Illustrator
<b>Writing</b>	Grants, research proposals, journal articles, posters presentations, ESA project deliverables and NPOC consultancy reporting.
<b>Collaborations</b>	On-going research with: <a href="#">The Group on Earth Observations Biodiversity Observation Network (GEO BON)</a> , Professor Stuart Phinn and Dr Peter Scarth (Remote Sensing Research Centre), Dr France Gerard (Centre of Ecology and Hydrology), Dr Lena Bloemertz (University of Basel); Dr Cornelis van der Waal (Namibian rangeland monitoring); Dr Nicholas Murray (University of New South Wales); Dr Alexandra Sandhage-Hofmann and Professor Jan Börner (University of Bonn); Dr Anja Linstädter (University of Cologne)
<b>Fieldwork</b>	Administrative and practical support in preparation for the SUSTINAFORREST field campaign. Forest inventory measurement; vegetation surveys (cover and species diversity); above ground biomass measurements; time-lapse/repeat photography (Phenocam); climate station; UAV; GNSS GPS sampling; soil sampling, coring and profiles; social science interviews; 4WD; remote field sites.
<b>Languages</b>	English and French (mother tongues), Spanish (advanced) German (intermediate)

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## WORKSHOPS

Sep 2023	<b>ARSET Biodiversity Applications for Airborne Imaging Systems</b>
Oct 2023	<b>1st EnMAP User Workshop</b>
Jul 2020	<b>GlobDiversity webinar, Open Science Conference (virtual)</b>
Feb 2020	<b>GlobDiversity Road Map meeting, Davos, Switzerland</b>
Jan 2020	<b>GlobDiversity Product Review meeting, Oberpfaffenhofen, Germany</b>
Jul 2019	<b>GEO BON IC meeting, Porto, Portugal</b>
Jun 2019	<b>Can EBVs be useful for vegetation models? Webinar</b>
Apr 2016	<b>Google Earth Engine, European Geoscience Union, Vienna, Austria</b>
Jan 2016	<b>Community Land Matters Workshop, Windhoek, Namibia</b>
Aug 2015	<b>R Programming Workshop, Centre for Marine Science, Brisbane, Australia</b>
Jul 2015	<b>Endeavour Professional Development Workshops, Brisbane, Australia</b>

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## PEER-REVIEW

Peer-reviewed journal articles for Environmental Conservation, Remote Sensing and International Journal of Remote Sensing

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## MEMBERSHIPS

The Group on Earth Observations Biodiversity Observation Network; Society for Conservation Biology; Swiss Association of Geography; Akademischer Alpen Club Basel; Club Alpin Suisse

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## REFERENCES

**Professor Nikolaus Kuhn**  
Head of Physical Geography  
University of Basel  
Tel: +41 (0)61 267 36 45  
Email:  
[nikolaus.kuhn@unibas.ch](mailto:nikolaus.kuhn@unibas.ch)

**Professor Stuart Phinn**  
School of Earth and  
Environmental Sciences  
The University of  
Queensland  
Tel: +61 7 33656526  
Email: [s.phinn@uq.edu.au](mailto:s.phinn@uq.edu.au)

**Professor Chinwe Ifejika**  
**Speranza** Unit Leader Land  
Systems and Sustainable Land  
Management  
Tel : +41 31 684 38 60  
Email:  
[chinwe.ifejika.speranza@unibe.ch](mailto:chinwe.ifejika.speranza@unibe.ch)