Victor Maus, PhD

Researcher

Curriculum Vitae
December 2019

WU Vienna University of Economics and Business
Institute for Ecological Economics
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Main areas of research

Geoinformatics, Remote Sensing, Environmental modeling

Academic career

2018 - Today **Researcher**
Institute for Ecological Economics, Vienna University of Economics and Business (WU), Austria

2016 - Today **Research Scholar**
Ecosystems Services and Management, International Institute for Applied Systems Analysis (IIASA), Austria

2014 - 2016 **Research Assistant**
Geoinformatics, University of Münster (WWU), Germany

2012 - 2014 **University Lecturer**
Science and Technology, Federal University of Pampa (UNIPAMPA), Brazil

2011 - 2012 **Research Assistant**
Earth System Science Center, National Institute for Space Research (INPE), Brazil

2009 - 2011 **Research Assistant**
Computer Science, Federal University of Juiz de Fora (UFJF), Brazil

Education

2011 - 2016 **PhD in Earth System Science** Supervisor Prof. Dr. Gilberto Câmara
Earth System Science Center, National Institute for Space Research (INPE), Brazil

2009 - 2011 **MSc in Computational Modeling** Supervisor Prof. Dr. Elson Magalhães Toledo
Computer Science Department, Federal University of Juiz de Fora (UFJF), Brazil

2004 - 2009 **BSc in Environmental Engineering** Supervisor Prof. Dr. Afranio Almir Righes
Engineering Department, Franciscan University (UFN), Brazil

Funded projects

2019 **Research Grant EUR 20,000.00** Principal investigator
Vienna University of Economics and Business (WU), Vienna, Austria

2013 **Educational Project Grant BRL 7,200.00** Principal investigator
Universidade Federal do Pampa (UNIPAMPA), Itaqui, RS, Brazil

Fellowships and awards

2013 **IIASA Young Scientists Summer Program Award EUR 5,000.00**
Centro de Gestão e Estudos Estratégicos (CGEE), Brasília-DF, Brazil

2009 **Master's Full Scholarship Award BRL 28,800.00**
Coordination for the Improvement of Higher Education Personnel (CAPES), Brasília-DF, Brazil

2008 **Scholarship Award BRL 6,000.00**
Research Support Foundation of Rio Grande do Sul (FAPERGS), Porto Alegre-RS, Brazil

2007 **Scholarship Award BRL 4,800.00**
Franciscan University (UFN), Santa Maria-RS, Brazil

2006 **Scholarship Award BRL 4,800.00**
Franciscan University (UFN), Santa Maria-RS, Brazil

2004 **Scholarship Award BRL 3,200.00**
Franciscan University (UFN), Santa Maria-RS, Brazil

Teaching experience

2019 - Today	**Sustainable Resource Management**	Vienna University of Economics and Business, Vienna, Austria
2013 - 2014	**Algorithms and Programming**	Federal University of Pampa, Itaqui-RS, Brazil
2013 - 2014	**Introduction to Informatics**	Federal University of Pampa, Itaqui-RS, Brazil
2013 - 2014	**Numerical Analysis**	Federal University of Pampa, Itaqui-RS, Brazil
2012 - 2012	**Environmental Management**	Federal University of Pampa, Itaqui-RS, Brazil
2012 - 2013	**Informatics**	Federal University of Pampa, Itaqui-RS, Brazil
2012 - 2012	**Introduction to Programming**	Federal University of Pampa, Itaqui-RS, Brazil
2010 - 2010	**Numerical Analysis**	Federal University of Juiz de Fora, Juiz de Fora-MG, Brazil
2009 - 2010	**Programming Laboratory**	Federal University of Juiz de Fora, Juiz de Fora-MG, Brazil

Supervision

2018 - 2019 **1 Master student / 2 Bachelor students**
Vienna University of Economics and Business, Vienna, Austria

2017 - 2018 **1 Master student**
University of Applied Sciences Wiener Neustadt, Wiener Neustadt-Niederösterreich, Austria

2017 - 2017 **2 PhD students in the Young Scientist Summer Program (YSSP)**
International Institute for Applied Systems Analysis, Laxenburg-Niederösterreich, Austria

Selected talks

2019 **Satellite Earth Observations for Impact Assessment of Global Supply Chains**
phi-week, European Space Agency (ESA) Centre for Earth Observation (ESRIN), Frascati, Italy

2019 **Using global crop maps to improve the estimation of impacts associated with biomass production**
Austrian Conference on International Resource Politics - Resources for a social-ecological transformation, Innsbruck University, Innsbruck, Austria

2017 **dtwSat: An R Package for Land Cover Classification Using Satellite Image Time Series**
Open Science Conference 2017, European Space Agency (ESA) Centre for Earth Observation (ESRIN), Frascati, Italy

2016 **Big Earth observation data analytics for land use and land cover change in the Brazilian Amazon**
Doctoral program in interdisciplinary environmental sciences (DENVI) Annual Meeting, University of Helsinki, Helsinki, Finland

2016 **Big Earth Observation Data Analytics: Matching Requirements to System Architectures**
Lecture at the Linköping University, Linköping University, Linköping, Sweden

2016 **Time-Weighted Dynamic Time Warping for satellite image time series analysis**
Lecture at the Humboldt University of Berlin, Humboldt University of Berlin, Berlin, Germany

2016 **Large-scale agricultural mapping using big earth observation data**
Brazil-Sweden Excellence Seminar, Coordination for the Improvement of Higher Education Personnel (CAPES), Brasília, Brazil

Peer-reviwed scientific publications

1. ★ **Maus**, V, G Câmara, M Appel, and E Pebesma (2019). dtwSat: Time-Weighted Dynamic Time Warping for Satellite Image Time Series Analysis in R. *Journal of Statistical Software, Articles* **88**(5), 1–31.
2. Stanimirova, R, P Arévalo, RK Kaufmann, V **Maus**, M Lesiv, P Havlík, and MA Friedl (2019). Sensitivity of global pasturelands to climate variation. *Earth's Future*.
3. Bruckner, M, T Häyhä, S Giljum, V **Maus**, G Fischer, S Tramberend, and J Börner (2019). Quantifying the global cropland footprint of the European Union's non-food bioeconomy. *Environmental Research Letters* **14**(4), 045011.
4. Bruckner, M, R Wood, D Moran, N Kuschnig, H Wieland, V **Maus**, and J Börner (2019). FABIO–The Construction of the Food and Agriculture Biomass Input-Output Model. *Environ. Sci. Technol.* **53**(19), 11302–11312.
5. Hadi, A Krasovskii, V **Maus**, P Yowargana, S Pietsch, and M Rautiainen (2018). Monitoring Deforestation in Rainforests Using Satellite Data: A Pilot Study from Kalimantan, Indonesia. *MDPI Forests* **9**(7).
6. Furlan, VJM, V **Maus**, I Batista, and NM Bandarra (2017). Production of docosahexaenoic acid by Aurantiochytrium sp. ATCC PRA-276. *Brazilian Journal of Microbiology* **48**(2), 359–365.
7. See, L, JC Laso Bayas, D Schepaschenko, C Perger, C Dresel, V **Maus**, C Salk, J Weichselbaum, M Lesiv, I McCallum, I Moorthy, and S Fritz (2017). LACO-Wiki: A New Online Land Cover Validation Tool Demonstrated Using GlobeLand30 for Kenya. *Remote Sensing* **9**(7).
8. ★ **Maus**, V, G Camara, R Cartaxo, A Sanchez, FM Ramos, and GR de Queiroz (2016). A Time-Weighted Dynamic Time Warping Method for Land-Use and Land-Cover Mapping. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* **9**(8), 3729–3739.
9. Furlan, VJM, M do Castelo Paulo, V **Maus**, J Ferreira, I Batista, and NM Bandarrac (2016). Production of docosahexaenoic acid (DHA) from Thraustochytrium sp. ATCC 26185 using different nitrogen concentrations. *Boletim Centro de Pesquisa de Processamento de Alimentos* **34**(2), 1–11.
10. Camara, G, LF Assis, G Ribeiro, KR Ferreira, E Llapa, L Vinhas, V **Maus**, A Sanchez, and RC Souza (2016). Big Earth Observation Data Analytics: Matching Requirements to System Architectures. In: *Proceedings of the 5th ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data*. BigSpatial '16. Burlingame, California: ACM, pp.1–6. http://doi.acm.org/10.1145/3006386.3006393.
11. See, L, D Schepaschenko, et al. (2015). Building a hybrid land cover map with crowdsourcing and geographically weighted regression. *ISPRS Journal of Photogrammetry and Remote Sensing* **103**. Global Land Cover Mapping and Monitoring, 48–56.
12. **Maus**, V, AB da Costa, and AA Righes (2009). Tratamento do lixiviado de aterro de resíduos sólidos urbanos por processo Fenton. *Tecno-lógica* **13**(1). (In Portuguese), 52–59.

Software

1. ★ **Maus**, V (2019). *dtwSat: Time-Weighted Dynamic Time Warping for Satellite Image Time Series Analysis*. Version 0.2.5. Comprehensive R Archive Network (CRAN). http://CRAN.R-project.org/package=dtwSat.
2. Simoes, R, G Camara, V **Maus**, A Carvalho, P Andrade, G Queiroz, A Sanchez, L Assis, A Marinho, and L Santos (2019). *SITS - Satellite Image Time Series Analysis*. Version 1.12.6. https://github.com/e-sensing/sits.
3. **Maus**, V, P Andrade, A Sanchez, LF Assis, G Ribeiro, and G Camara (2018). *wtss: An R Client for a Web Time-Series Service*. Version 1.1.0. Comprehensive R Archive Network (CRAN). https://cran.r-project.org/web/packages/wtss.
4. **Maus**, V (2015). *SITS Viewer - Python plugin for Satellite image time series visualization in QGIS*. Version 1. https://github.com/vwmaus/sits_viewer.
5. ★ **Maus**, V (2015). *Finite Elements Method (FEM) software for Advective-Diffusive-Reactive Transport of organic solutes in porous media*. Version 1. Available on request.

Thesis

1. **Maus**, V (Apr. 2016). "Land use and land cover monitoring using remote sensing image time series". Doctor of Philosophy in Earth System Science. PhD thesis. São José dos Campos, Brazil: National Institute for Space Research.
2. **Maus**, V (Feb. 2011). "Computational modelling applied to contaminant transport in groundwater". Master of Science in Computational Modelling. (in Portuguese). MA thesis. Juiz de Fora, Brazil: Federal University of Juiz de Fora.
3. **Maus**, V (Jan. 2009). "Treatment of leachate from municipal solid waste by Fenton process". Bachelor of Science in Environmental Engineering. (in Portuguese). BA thesis. Santa Maria, Brazil: Franciscan University.

Science communication

1. Bruckner, M, T Häyhä, S Giljum, V **Maus**, G Fischer, S Tramberend, and J Börner (2019). *Europe's expanding non-food bioeconomy is heavily dependent on foreign land areas*. FINEPRINT Brief No. 5. https://www.fineprint.global/briefs/europes-dependency-on-foreign-land-areas/.

2. **Maus**, V and SG Nikolas Kuschnig (2018). *Open science and reproducibility: The FINEPRINT infrastructure*. FINEPRINT Brief No. 1. https://www.fineprint.global/briefs/open-science-and-reproducibility/.
3. **Maus**, V (July 2017). *New open-source software supports land-cover monitoring*. http://blog.iiasa.ac.at/2017/07/03/new-open-source-software-supports-land-cover-monitoring/.

Journal review assignments

- Remote Sensing of Environment
- Computers & geosciences
- International Journal of Remote Sensing
- IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
- Remote Sensing MDPI
- Sustainability MDPI