

Victor Maus, PhD

Researcher

Curriculum Vitae

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📍 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 Earth System Science Center, National Institute for Space Research (INPE), Brazil	Supervisor Prof. Dr. Gilberto Câmara
2009 - 2011	MSc in Computational Modeling Computer Science Department, Federal University of Juiz de Fora (UFJF), Brazil	Supervisor Prof. Dr. Elson Magalhães Toledo
2004 - 2009	BSc in Environmental Engineering Engineering Department, Franciscan University (UFN), Brazil	Supervisor Prof. Dr. Afranio Almir Righes

Funded projects

2019	Research Grant EUR 20,000.00 Vienna University of Economics and Business (WU), Vienna, Austria	Principal investigator
2013	Educational Project Grant BRL 7,200.00 Universidade Federal do Pampa (UNIPAMPA), Itaqui, RS, Brazil	Principal investigator

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

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	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
2015	Land use mapping in the Brazilian Amazon with remote sensing time series 35th EARSeL Symposium and 2nd EARSeL International Workshop on Temporal Analysis of Satellite Images, KTH Royal Institute of Technology, Stockholm, Sweden

10 most important scientific publications

1. ★ **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. DOI: 10.1109/JSTARS.2016.2517118.

2. ★ **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. DOI: 10.18637/jss.v088.i05.
3. 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. DOI: 10.1016/j.isprsjprs.2014.06.016.
4. 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. DOI: 10.1088/1748-9326/ab07f5.
5. 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). DOI: 10.3390/rs9070754.
6. Assis, LF, G Ribeiro, KR Ferreira, L Vinhas, E Llapa, A Sanchez, V **Maus**, and G Camara (2016). Big data streaming for remote sensing time series analytics using MapReduce. In: *Proceedings of the Brazilian Symposium on Geoinformatics*. Campos do Jordão, Brazil: Revista Brasileira de Cartografia, pp.228–239. <http://www.seer.ufu.br/index.php/revistabrasileiracartografia/article/view/44011>.
7. 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. DOI: 10.1145/3006386.3006393. <http://doi.acm.org/10.1145/3006386.3006393>.
8. Maciel, AM, G Camara, V **Maus**, L Vinhas, and A Sanchez (2016). Using dynamic geospatial ontologies to support information extraction from big Earth observation data sets. In: *International Conference on GIScience*. Montreal, Canada, pp.41–44. DOI: 10.21433/B3115w54k25v. <http://escholarship.org/uc/item/5w54k25v>.
9. 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). DOI: 10.3390/f9070389.
10. Furlan, VJM, V **Maus**, I Batista, and NM Bandarra (2017). Production of docosaheptaenoic acid by *Aurantiochytrium* sp. ATCC PRA-276. *Brazilian Journal of Microbiology* **48**(2), 359–365. DOI: 10.1016/j.bjm.2017.01.001.

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/>.