

ANDRÉS C. RODRÍGUEZ

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<https://ac-rodriguez.co/>, Google-Scholar

EDUCATION

ETH Zurich

October 2017 - Present

PhD Photogrammetry and Remote Sensing

Main focus in the intersection of Deep Learning / Machine Learning, Computer Vision and Remote Sensing for open issues in Ecology and Agriculture

ETH Zurich

August 2017

Msc Statistics

Main focus in Machine Learning

Thesis: “Unsupervised Learning: Generative Models for Cosmology”

Pontificia Universidad Javeriana, Bogota - Colombia

December 2012

B.S. Industrial Engineering

Main focus in the intersection of Mathematical Modeling and Ergonomics

Thesis: “Optimizing the use of the muscles in industrial jobs by rotation schemes”

EXPERIENCE

ETH Zurich

October 2017 - Present

Research Assistant

Zurich, Switzerland

- EcoVision and Photogrammetry and Remote Sensing Group
- Satellite Image Understanding using Deep Learning
- Co-supervisor of Several Bsc. and Master thesis
- Co-organizer of the first Machine Learning Workshop for Environmental and Geosciences (MLEG2019) www.mleg.ethz.ch

ETH Zurich

April 2016 - September 2017

Research Assistant

Zurich, Switzerland

- MTEC - Chair of Risk and Insurance Economics
- Data processing with STATA and R

Pontificia Universidad Javeriana

March 2014 - July 2016

Research Assistant

Bogota, Colombia

- Joint Research Project with University of Washington, WA and Northeastern University, MA
- Research Project: “Whole Body Vibration (WBV) Exposure at open Pit coal mines”
- Data processing and statistical analysis

TECHNICAL STRENGTHS

Advanced Knowledge
Intermediate Knowledge

Python, Pytorch, Tensorflow, GDAL, QGIS, R, SAS, STATA
SQL, C++

LANGUAGE SKILLS

English	C2
German	C1
Spanish	Native Language

PUBLICATIONS

- [1] CULMAN, M., RODRÍGUEZ, A. C., WEGNER, J. D., DELALIEUX, S., AND SOMERS, B. Deep learning for sub-pixel palm tree classification using spaceborne sentinel-2 imagery. In *Remote Sensing for Agriculture, Ecosystems, and Hydrology XXIII* (2021), vol. 11856, SPIE, pp. 45–50.
- [2] RODRÍGUEZ, A. C., AND BARRERO, L. H. Job rotation: Effects on muscular activity variability. *Applied Ergonomics* 60 (2017), 83 – 92.
- [3] RODRÍGUEZ, A. C., D’ARONCO, S., SCHINDLER, K., AND WEGNER, J. D. Mapping oil palm density at country scale: An active learning approach. *Remote Sensing of Environment* 261 (2021), 112479.
- [4] RODRÍGUEZ, A. C., DAUDT, R. C., D’ARONCO, S., SCHINDLER, K., AND WEGNER, J. D. Robust damage estimation of typhoon goni on coconut crops with sentinel-2 imagery. *Remote Sensing* 13, 21 (2021), 4302.
- [5] RODRÍGUEZ, A. C., D’ARONCO, S., SCHINDLER, K., AND WEGNER, J. D. Privileged pooling: Better sample efficiency through supervised attention. *under review* (2021).
- [6] RODRÍGUEZ, A. C., KACPRZAK, T., LUCCHI, A., AMARA, A., SGIER, R., FLURI, J., HOFMANN, T., AND RÉFRÉGIER, A. Fast cosmic web simulations with generative adversarial networks. *Computational Astrophysics and Cosmology* 5, 1 (Nov 2018), 4.
- [7] RODRÍGUEZ, A. C., AND WEGNER, J. D. Counting the uncountable: deep semantic density estimation from space. *German Conference of Pattern Recognition 2018* (2018).