

Jonathan Pando Ocón
Winter 2022 | studyingplace.space

University of California, Los Angeles, Department of Geography

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Education

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| University of California, Los Angeles (UCLA) Los Angeles, CA Doctor of Philosophy, Geography | Expected Jun 2023 |
| University of California, Los Angeles (UCLA) Los Angeles, CA Master of Arts, Geography | Jun 2020 |
| University of Southern California (USC) Los Angeles, CA Bachelor of Science, Policy, Planning, and Development | May 2013 |

Honors and Awards

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| Spring 2021 Residency Nature Art & Habitat <i>Residency</i> | Mar 2021 |
| Graduate Dean's Scholar Award Graduate Division, UCLA | Jun 2019, 2020 |
| Geospatial @ UCLA Summer Fellowship Geography, UCLA | Jun 2019 |
| Mars Exploration Zone Map Competition, Second Place ICA & NASA | Jan 2017 |
| Distinguished Budget Award Government Financial Office Association | Jun 2016 |
| Student Recognition Award Sol Price School of Public Policy, USC | May 2012 |

Teaching Experience

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| Cartography (GEOG-180) Geography, UCLA Instructor | Jun 2021 – Jul 2021 |
| GIS Programming and Development (GEOG-181C) Geography, UCLA Teaching Associate | April 2021 – Jun 2021 |
| Cartography (GEOG-167) Geography, UCLA Instructor | Aug 2020 – Sept 2020 |
| Introduction to GIS (GEOG-7) Geography, UCLA Teaching Assistant | Jan 2020 – March 2020 |

Publications

- Ocón JP, Ibanez T, Franklin J, Pau S, Keppel G, Rivas-Torres G, et al. (2021) Global tropical dry forest extent and cover: A comparative study of bioclimatic definitions using two climatic data sets. *PLoS ONE* 16(5): [e0252063](https://doi.org/10.1371/journal.pone.0252063).
- Ordway, E. M., Elmore, A. J., Kolstoe, S., Quinn, J. E., Swanwick, R., Cattau, M., ... & Wilson, C. (2021). Leveraging the NEON Airborne Observation Platform for socio-environmental systems research. *Ecosphere*, 12(6), [e03640](https://doi.org/10.1002/ecsp.3640).
- Turner, V. K., Rogers, M. L., Zhang, Y., Middel, A., Schneider, F. A., Ocón, J. P., Seeley, M., & Dialesandro, J. (2022). More than surface temperature: Mitigating thermal exposure in hyper-local land system. *Journal of Land Use Science* (forthcoming). DOI: 10.1080/1747423X.2021.2015003
- Ocón, J. P., Gillespie, T. W., Stavros, E. N., Steinberg, S. J., & Robertson, J. (2022). Methods for Identifying urban tree species with multisource remote sensing imagery. *In preparation for publication*.
- Ocón, J. P., Gillespie, T. W., Stavros, E. N., Steinberg, S. J., Robertson, J., & DeLisle, C. (2022). Urban tree identification using GIS, very high resolution imagery, and lidar in Los Angeles County. *In preparation for publication*.
- Madson, A., Dimson, M., Ocón, J. P., Kawelo, K., Beilman, M., Kay, K., & Gillespie, T. W. (2022). A Four-Decade Time Series of NDVI for the Hawaiian Islands. *In preparation for publication*.

Presentations and Proceedings

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| Picking up traces: An interdisciplinary approach to multispecies storytelling Presentation , NAHR | Dec 2021 |
| Applications of LAR-IAC Data in Urban Forest Planning and Management Presentation , LAR-IAC | Oct 2021 |

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| A Global Bioclimatic Analysis of Tropical Dry Forest Extent and Cover Contributed talk , Ecological Society of America | Aug 2020 |
| Bioclimatic definitions of tropical dry forest improve our ability to map this critically endangered biome Contributed talk , Society for Conservation GIS | Aug 2020 |
| Transformative Climate Communities: Informing Adaptation Planning through Cool Urban Design Interventions in Southern California Contributed talk , American Meteorological Society | Jan 2020 |

Research Experience

Los Angeles County Tree Inventory & Health Assessment Pilot Project | LA County Jan 2021 – Present

Automate a process working with LiDAR and hyperspectral imagery to identify and assess the health of trees within Los Angeles County (LAC) to reduce the need of the client to perform this assessment in person.

Applies remote sensing and modeling methodologies:

- Produce a literature review covering the application of acquired data and machine learning to tree identification and forest structure and composition analysis. Target journal: *Scientific Reports*.
- Assemble and train model to identify and assess the health of trees in project areas. Validate results against a testing subset of the dataset.
- Incorporate fine resolution land cover classification and unmixing methodologies for heterogeneous urban cover.
- Package and deliver model code for sustained use by the client for future application across the entirety of LAC.

Global Analysis of Tropical Dry Forest Extent | Dr. Thomas W. Gillespie, UCLA Aug 2018 – Sept 2020

Comparison of climatic definitions of tropical dry forest extent for conservation assessment using remote sensing and geospatial programming.

Applied remote sensing methodologies:

- Generation of ecological rasters for species distribution modeling using Worldclim (Fick and Hijmans 2017) and CHELSA (Kraeger et al. 2017) global climate datasets and processing in the Python and R environments.
- HDF5 file management and processing of IMERG (GPM) precipitation data in the Python environment.
- Forest Cover and change analysis using Global Forest Cover (Hansen et al. 2013) data in Google Earth Engine.

Impact of Urban Form on Thermal Comfort | Dr. V. Kelly Turner, UCLA Aug 2019 – July 2020

Modeling mean radiant and land surface temperatures at fine resolutions to understand thermal comfort in underrepresented neighborhoods in California, and a new urbanist development in Tucson, Arizona using remote sensing, geospatial programming, and microclimate modeling.

Applied remote sensing and modeling methodologies:

- Image calibration of NAIP (USDA) imagery and supervised classification of land cover using random forests in Google Earth Engine.
- Land surface temperature, albedo, and vegetation indices (NDVI and SAVI) generation using NAIP and Landsat 8 OLI imagery in Google Earth Engine, R, and QGIS environments.
- Individual tree estimation in urban areas using canopy height modeling and land cover classification with NAIP imagery and LARIAC4 (Los Angeles County) LiDAR point clouds in the R environment.
- Microclimate climate modeling at the neighborhood scale using the ENVI_MET 3-D modeling software. Surface and vegetation layers were ingested into the software to digitize fine resolution simulations of each site.

Housing Development and Design in Los Angeles | Liz Falleta, USC Aug 2012 – May 2013

Ascertained historical records and tenant data on three multi-unit, architecturally significant housing projects in Los Angeles to highlight the importance of well-designed, multi-unit housing for future development.

[By-Right, By-Design: Housing Development versus Housing Design in Los Angeles](#) (Falleta, 2019)

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Conferences

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| Society for Conservation GIS Virtual Conference | Aug 2020 |
| Ecological Society of America Annual Meeting Salt Lake City, UT | Aug 2020 |
| American Meteorological Society Annual Meeting Boston, MA | Jan 2020 |
| GIScience 2016 Montreal, QC, CA | Sept 2016 |

Professional Service

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| Landscape Exchange Network for Socio-environmental systems (LENS) | Mar 2020 – Present |
| Graduate Student Steering Committee Member NSF: DEB-2054939 | |
| AAG COVID-19 Rapid Response Subcommittee Non-member Contributor | May 2020 |
| President and Social Chair Geography Graduate Student's Association, UCLA | Sept 2019 – Jun 2020 |
| Graduate Student Rep, Geography Graduate Student Advisory Board, UCLA | Sept 2019 – Jun 2020 |

Professional Development

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| Integrating Machine Learning into Geographic Research | Feb 2021 |
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AAG Learning Series for Graduate Students, Virtual

- Five-day virtual workshop focused on the fundamental concepts and techniques related to machine learning's application in geographic research. Covered scikit-learn (Python) and cloud computing (Google CoLab), taught by Dr. Yingjie Hu, Ass. Professor, Geography, Univ. of Buffalo, NY.

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| People, Land, & Ecosystems: Leveraging NEON for Socio-Environmental Synthesis | Feb 2020 |
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National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD

- Three-day workshop focused on use of National Ecological Observatory Network (NEON) Airborne Observation Platform (AOP) data in socio-environmental (S-E) synthesis and convergent research.

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| Machine Learning for Spatial and Temporal Analysis | Sept 2016 |
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GIScience 2016, McGill University, Université Laval and University of Saskatchewan, Montreal, QC, CA

- Learned key machine learning concepts, including training and testing models in the R environment. Participants used real world datasets as examples for model building in support vector machines and random forests.

Professional Associations

Member Since

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| Full Member, Sigma Xi Research Honor Society | Dec 2021 |
| Student Member, Political Ecology Working Group (PEWG) | Feb 2021 |
| Student Member, American Geophysical Union (AGU) | Aug 2020 |
| Student Member, Ecological Society of America (ESA) | Feb 2020 |
| Student Member, American Association of Geographers (AAG) | Oct 2019 |
| Student Member, Society for Conservation GIS (SCGIS) | Sept 2016 |
| Explorer Member, The Planetary Society | Aug 2016 |

Professional Experience

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| Sole Proprietor Concrete Couture Designs | Jan 2015 – Present |
| Assistant Administrative Analyst City of Santa Monica, CA | Sept 2017 – Sept 2018 |
| Administrative Technician City of San Mateo, CA | Sept 2013 – Jun 2016 |
| Planning Intern City of West Covina, CA | Sept 2012 – Feb 2013 |
| Planning Intern Strategic Actions for a Just Economy, Los Angeles, CA | Jan 2011 – May 2011 |