

# Levente Juhász

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Geographic Information Systems (GIS) Center  
Florida International University  
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## EDUCATION

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**Ph.D. Geomatics.** 2018. University of Florida, Gainesville, FL USA  
**MSc Geography - Geoinformatics.** 2013. University of Szeged, Hungary  
**BSc Geography - Geoinformatics.** 2011. University of Szeged, Hungary  
**Languages** - English, Hungarian, Spanish (conversational)

## EMPLOYMENT (\* denotes non-academic, industry experience)

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### Florida International University (FIU), Miami, FL, USA

- **Research Assistant Professor**, Geographic Information Systems (GIS) Center (2022 - present)
- **Assistant Director of GIScience**, GIS Center (2023 - present)
- **Director (Interim)**, GIS Center (2022 - 2023)
- **Adjunct Faculty**, Knight Foundation School of Computing & Information Sciences (2024- present)
- **Courtesy Faculty**, Department of Earth & Environment (2020 - present)
- **Adjunct Faculty**, School of International & Public Affairs (2023)
- **Research Associate** (12-month faculty), GIS Center (2019 - 2022)

### University of Florida, Gainesville, FL, USA

- Graduate Research Assistant (Geomatics Sciences) (2014 - 2018)

### Carinthia University of Applied Sciences, Villach, Austria

- Visiting Scientist, Geoinformation Technology Department (2018)

### Mapillary (acquired by Meta)\*, Remote

- Data Scientist (2015 - 2017)

### Joint Research Centre of the European Commission, Ispra, Italy

- Visiting Scientist, Digital Earth & Reference Data Unit (2014)

### University of Szeged, Szeged, Hungary

- Research Assistant, Department of Physical Geography & Geoinformatics (2011 - 2014)

### Compet-Terra Consulting\*, Szeged, Hungary

- GIS Developer (2013 - 2014)

## PUBLICATIONS

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1. Parkinson, R.W., **Juhász, L.**, Xu, J., Fu, Z.J. (2024). Future Shorelines: A Living Shoreline Site Selection and Design Decision Support Tool that Incorporates Future Conditions Induced by Sea Level Rise. *Estuaries and Coasts*. 47, pp. 2641–2654. doi: [10.1007/s12237-024-01425-9](https://doi.org/10.1007/s12237-024-01425-9)

2. Hochmair, H.H., **Juhász, L.**, Kemp, T. (2024). Correctness Comparison of ChatGPT-4, Gemini, Claude-3, and Copilot for Spatial Tasks. *Transactions in GIS*. 28(7), pp. 2219-2231. doi: [10.1111/tgis.13233](https://doi.org/10.1111/tgis.13233)
3. **Juhász, L.** (2024). Assessing publication trends in selected GIScience journals. *International Journal of Geographical Information Science*. 38(8), pp. 1443-1467. doi: [10.1080/13658816.2024.2347306](https://doi.org/10.1080/13658816.2024.2347306)
4. **Juhász, L.**; Xu, J.; Parkinson, R.W. (2023). Beyond the Tide: A Comprehensive Guide to Sea Level Rise Inundation Mapping using FOSS4G. *Geomatics*. 3(4), pp. 522-540. doi: [10.3390/geomatics3040028](https://doi.org/10.3390/geomatics3040028)
5. Mooney, P., Cui, W., Guan, B., **Juhász, L.** (2023). Towards Understanding the Geospatial Skills of ChatGPT: Taking a Geographic Information Systems (GIS) Exam. In *6th ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery (GeoAI '23), November 13, 2023, Hamburg, Germany*. ACM, New York, NY, USA. pp. 85-94. doi: [10.1145/3615886.3627745](https://doi.org/10.1145/3615886.3627745)
6. **Juhász, L.**, Mooney, P., Hochmair, H.H., Guan, B. (2023). ChatGPT as a mapping assistant: A novel method to enrich maps with generative AI and content derived from street-level photographs. *Spatial Data Science Symposium 2023 Paper Proceedings*. UC Santa Barbara Center for Spatial Studies. doi: [10.25436/E2ZW27](https://doi.org/10.25436/E2ZW27)
7. **Juhász, L.**, Hochmair, H.H. (2023). Spatial and Temporal Analysis of Location and Usage of Public Electric Vehicle Charging Infrastructure in the United States. *GI\_Forum*. 11(1), pp. 83-100. doi: [10.1553/giscience2023\\_01\\_s83](https://doi.org/10.1553/giscience2023_01_s83)
8. Schrick-Matthews, A., Hochmair H.H., Sternikova, D., **Juhász, L.** (2023). Bicycle Trips in Endomondo, Google Maps, and MapQuest: A Comparison between South Florida and North Holland. *Transportation Letters*. 15(4), pp. 308-320. doi: [10.1080/19427867.2022.2050494](https://doi.org/10.1080/19427867.2022.2050494)
9. **Juhász, L.**, Mooney, P. (2022). "I think I discovered a military base in the middle of the ocean" - Null Island, the most real of fictional places. *IEEE Access*. 10. pp. 84147-84165. doi: [10.1109/ACCESS.2022.3197222](https://doi.org/10.1109/ACCESS.2022.3197222)
10. Hochmair, H.H., Benjamin, A., Gann, D., **Juhász, L.**, Olivas, P., Fu, Z.J. (2022). Change Analysis of Urban Tree Canopy in Miami-Dade County. *Forests*. 13(6): 949. doi: [10.3390/f13060949](https://doi.org/10.3390/f13060949)
11. Grinberger, A.Y., Minghini, M., **Juhász, L.**, Mooney, P., Yeboah, G. (2022). Bridges and Barriers: An Exploration of Engagements of the Research Community with the OpenStreetMap Community. *ISPRS International Journal of Geo-Information*. 11(1): 54. doi: [10.3390/ijgi11010054](https://doi.org/10.3390/ijgi11010054)
12. Mooney, P., & **Juhász, L.** (2022). Null Island - a node of contention in OpenStreetMap. In: Minghini, M., Liu, P., Li, H., Grinberger, A.Y., & Juhász, L. (Eds.). *Proceedings of the Academic Track at State of the Map 2022*. (pp. 23-25). Florence, Italy, 19-21 August 2022. doi: [10.5281/zenodo.7004488](https://doi.org/10.5281/zenodo.7004488)
13. Fu, Z., **Juhász, L.**, Krefft, J., Ter-Ghazaryan, D., Guan, B. (2022). Library-Based Data Curation, Management and Interdisciplinary Research at Florida International University: Reciprocal Use of Data through Collaboration. *Proceedings of the 42nd IAUTL Conference*. Miami, FL
14. Mooney, P., Grinberger, A. Y., Minghini, M., Coetzee, S., **Juhász, L.**, & Yeboah, G. (2021). OpenStreetMap Data Use Cases During the Early Months of the COVID-19 Pandemic. In: Rajabifard, Foliente & Paez (Eds.), *COVID-19 Pandemic, Geospatial Information, and Community Resilience – Global Applications and Lessons*. CRC Press (Taylor & Francis) (pp. 171-185) doi: [10.1201/9781003181590-15](https://doi.org/10.1201/9781003181590-15)
15. Kovacs-Györi, A., Ristea, A., Havas, C., Mehaffy, M., Hochmair, H., Resch, B., **Juhász, L.**, Lehner, A., Ramasubramanian, L., Blaschke, T. (2020). Opportunities and challenges of geospatial analysis for promoting urban livability in the era of big data and machine learning. *ISPRS International Journal of Geo-Information*. 9(12): 752. ; doi: [10.3390/ijgi9120752](https://doi.org/10.3390/ijgi9120752)
16. **Juhász, L.** (2021). Towards understanding the temporal accuracy of OpenStreetMap: A quantitative experiment. In: Minghini, M., Ludwig, C., Anderson, J., Mooney, P., Grinberger, A.Y., (Eds.). *Proceedings of the Academic Track at the State of the Map 2021* (pp. 19-22). Online Conference, doi: [10.5281/zenodo.5112236](https://doi.org/10.5281/zenodo.5112236)

17. Spiegelhalter, T., **Juhász, L.**, Namuduri, S. (2021). Genetic Water-Energy-Food Nexus Design Research for Miami's Greater Islands – Climate Resilient Urban Nexus Choices (CRUNCH). *Proceedings of the 27th World Congress of Architects*. Vol. 2. (pp. 994 – 998). Rio de Janeiro, Brazil.
18. **Juhász, L.**, Hochmair, H.H., Aguilar de Santana, S., Fu, Z. (2020). Sea Level Rise Impact Assessment Tool – A Web-Based Application for Community Resilience in Coral Gables, Florida. *International Journal of Spatial Data Infrastructures Research*. 15(1): pp. 36-55. doi: [10.2902/1725-0463.2020.15.art2](https://doi.org/10.2902/1725-0463.2020.15.art2)
19. Mooney, P., **Juhász, L.** (2020). Mapping COVID-19: How online maps contribute to the infodemic. *Dialogues in Human Geography*. 10(2): pp. 265 - 270 . doi: [10.1177/2043820620934926](https://doi.org/10.1177/2043820620934926)
20. **Juhász, L.**, Novack, T., Hochmair, H.H., Qiao, S. (2020). Cartographic Vandalism in the Era of Location-Based Games—The Case of OpenStreetMap and Pokémon GO. *ISPRS International Journal of Geo-information*. 9(4): 197. doi: [10.3390/ijgi9040197](https://doi.org/10.3390/ijgi9040197)
21. **Juhász, L.**, Hochmair H.H. (2020). Studying Spatial and Temporal Visitation Patterns of Points of Interest Using SafeGraph Data in Florida. *GI\_Forum*. 8(1): pp. 119-136. doi: [10.1553/giscience2020\\_01\\_s119](https://doi.org/10.1553/giscience2020_01_s119)
22. Spiegelhalter, T., Andia, A., **Juhász, L.**, Namuduri, S. (2020). Generative and Synthetic Biological Design Imaginations for the Miami Bay Area. In: Werner, L.C., Koering, D. (Eds.) *Anthropologic – Architecture and Fabrication in the cognitive age – Proceedings of the 38<sup>th</sup> International Online Conference on Education and Research in Computer Aided Architectural Design in Europe* (pp. 11-20) Berlin: eCAADe
23. Mohammad, M.H., **Juhász, L.**, Southworth, J. (2019). Mapping Time-Space Brickfield Development Dynamics in Peri-Urban Area of Dhaka, Bangladesh. *ISPRS International Journal of Geo-Information*. 8(10):447. doi: [10.3390/ijgi8100447](https://doi.org/10.3390/ijgi8100447)
24. **Juhász, L.**, Hochmair, H.H. (2019). Comparing the Spatial and Temporal Activity Patterns between Snapchat, Twitter, and Flickr in Florida. *GI\_Forum*. 7(1): pp. 134-147. doi: [10.1553/giscience2019\\_01\\_s134](https://doi.org/10.1553/giscience2019_01_s134)
25. Matthews, A., Hochmair, H.H., Strelnikova, D., **Juhász, L.** (2019). Comparing the Characteristics of Bicycle Trips between Endomondo, Google Maps, and MapQuest. *Transportation Research Board – 98th Annual Meeting*, Washington, D.C.
26. Grinberger, A.Y., Minghini, M., **Juhász, L.**, Mooney, P., Yeboah, G. (2019). Bridging the Map? Exploring Interactions between the Academic and Mapping Communities in OpenStreetMap. In: Minghini, M., Grinberger, A.Y., Juhász, L., Yeboah, G., Mooney, P. (Eds.). *Proceedings of the Academic Track at the State of the Map 2019* (pp. 1-2). Heidelberg, Germany, 21-23 September, 2019. doi: [10.5281/zenodo.3408639](https://doi.org/10.5281/zenodo.3408639)
27. Hochmair, H.H., **Juhász, L.** (2019). Analysis of Flickr, Snapchat, and Twitter use for the modeling of visitor activity in Florida State Parks. In: Kyriakidis, P., Hadjimitsis, D., Skarlatos, D. & Mansourian, A. (Eds.) *Accepted Short Papers and Posters from the 22nd AGILE Conference on Geo-information Science*. Cyprus University of Technology 17-20 June 2019, Limassol, Cyprus
28. **Juhász, L.**, Hochmair, H.H., Qiao, S., Novack, T. (2019). Exploring the Effects of Pokémon Go Vandalism on OpenStreetMap. In: Minghini, M., Grinberger, A.Y., Juhász, L., Yeboah, G., Mooney, P. (Eds.). *Proceedings of the Academic Track at the State of the Map 2019* (pp. 3-4). Heidelberg, Germany, 21-23 September, 2019. doi: [10.5281/zenodo.3386533](https://doi.org/10.5281/zenodo.3386533)
29. **Juhász, L.**, Hochmair, H.H. (2018). OSM Data Import as an Outreach Tool to Trigger Community Growth? A Case Study in Miami. *ISPRS International Journal of Geo-Information*. 7 (3): 113. doi: [10.3390/ijgi7030113](https://doi.org/10.3390/ijgi7030113)
30. Hochmair, H.H., **Juhász, L.**, and Cvetojevic, S. (2018). Data Quality of Points of Interest in Selected Mapping and Social Media Platforms. In: Kiefer P., Huang H., Van de Weghe N., Raubal M. (Eds.)

- Progress in Location Based Services 2018. LBS 2018. Lecture Notes in Geoinformation and Cartography* (pp. 293-313) Berlin: Springer. doi: [10.1007/978-3-319-71470-7\\_15](https://doi.org/10.1007/978-3-319-71470-7_15)
31. **Juhász, L.**, Hochmair, H.H. (2018). Cross-checking user activities in multiple geo-social media networks. In: Mansourian, A., Pilesjö, P., Harrie, L., & von Lammeren, R. (Eds.) *Geospatial Technologies for All : Short papers, posters and poster abstracts of the 21th AGILE Conference on Geographic Information Science*. Lund University 12-15 June 2018, Lund, Sweden
  32. **Juhász, L.**, Hochmair, H.H. (2018). Analyzing the spatial and temporal dynamics of Snapchat. *VGI-ALIVE Pre-Conference Workshop at AGILE 2018*. 12 June 2018. Lund, Sweden.
  33. **Juhász, L.**, Hochmair, H.H. (2017). Where to catch 'em all? – a geographic analysis of Pokémon Go locations. *Geo-spatial Information Science*. 20(3): pp. 241-251. doi: [10.1080/10095020.2017.1368200](https://doi.org/10.1080/10095020.2017.1368200)
  34. **Juhász, L.**, Hochmair, H.H. (2017). How do volunteer mappers use crowdsourced Mapillary street level images to enrich OpenStreetMap? In: Bregt, A., Sarjakoski, T., Lammeren, R. van, Rip, F. (Eds.) *Societal Geo-Innovation : short papers, posters and poster abstracts of the 20th AGILE Conference on Geographic Information Science*. Wageningen University & Research 9-12 May 2017, Wageningen, The Netherlands
  35. **Juhász, L.**, Rousell, A., Jokar Arsanjani, J. (2016). Technical Guidelines to Extract and Analyze VGI from Different Platforms. *Data*. 1(3):15. doi: [10.3390/data1030015](https://doi.org/10.3390/data1030015)
  36. Cvetojevic, S., **Juhász, L.** and Hochmair H.H. (2016). Positional Accuracy of Twitter and Instagram Images in Urban Environments. *GI\_Forum*, 4(1): pp. 191-203. doi: [10.1553/giscience2016\\_01\\_s191](https://doi.org/10.1553/giscience2016_01_s191)
  37. **Juhász, L.**, Hochmair, H.H. (2016). User Contribution Patterns and Completeness Evaluation of Mapillary, a Crowdsourced Street Level Photo Service. *Transactions in GIS*. 20 (6): pp. 925–947 doi: [10.1111/tgis.12190](https://doi.org/10.1111/tgis.12190)
  38. **Juhász, L.**, Hochmair, H.H. (2016). Cross-linkage between Mapillary Street Level Photos and OSM Edits. In: T. Sarjakoski, M. Y. Santos, L. T. Sarjakoski (Eds.), *Geospatial Data in a Changing World – Lecture Notes in Geoinformation and Cartography* (pp. 141-156). Berlin: Springer. doi: [10.1007/978-3-319-33783-8\\_9](https://doi.org/10.1007/978-3-319-33783-8_9)
  39. **Juhász, L.**, Podolcsák, Á., Dolleschall, J. (2016). Open Source Web GIS Solutions in Disaster Management – with Special Emphasis on Inland Excess Water Modeling. *Journal of Environmental Geography*, 9 (1–2): pp. 15–21. doi: [10.1515/jengeo-2016-0003](https://doi.org/10.1515/jengeo-2016-0003)
  40. **Juhász, L.**, Hochmair, H.H. (2015). Exploratory Completeness Analysis of Mapillary for Selected Cities in Germany and Austria. *GI\_Forum*. 3(1): pp. 535-545. doi: [10.1553/giscience2015s535](https://doi.org/10.1553/giscience2015s535)

#### **Other publications and technical reports (not peer-reviewed)**

1. Grinberger, A.Y., Liu, P., Li, H., **Juhász, L.**, & Minghini, M. (2022). OpenStreetMap, beyond just Data: The Academic Track at State of the Map 2022 (Editorial). In: Minghini, M., Liu, P., Li, H., Grinberger, A.Y., & **Juhász, L.** (Eds.). *Proceedings of the Academic Track at State of the Map 2022*, Florence, Italy, 19-21 August 2022. doi: [10.5281/zenodo.7004424](https://doi.org/10.5281/zenodo.7004424)
2. Grinberger, A.Y., Minghini, M., **Juhász, L.**, Yeboah, G., Mooney, P. (2022). Editorial: OSM Science – the Academic Study of the OpenStreetMap Project, Data, Contributors, Community, and Applications. *ISPRS International Journal of Geo-Information*. 11(4): 230. doi: [10.3390/ijgi11040230](https://doi.org/10.3390/ijgi11040230)
3. Hochmair, H. H., Benjamin, A., Gann, D., **Juhász, L.**, Olivas, P. C., & Fu, Z. (2021). Miami-Dade County Urban Tree Canopy Analysis. Final report prepared for Miami-Dade County and American Forests. doi: [10.25148/GIS.009116](https://doi.org/10.25148/GIS.009116)
4. Minghini, M., Coetzee, S., Grinberger, A.Y., Yeboah, G., **Juhász, L.**, Mooney, P. (2020) Editorial: OpenStreetMap research in the COVID-19 era. In: Minghini, M., Coetzee, S., Juhász, L., Yeboah, G., Mooney, P., & Grinberger, A. Y. (Eds.). *Proceedings of the Academic Track at the State of the Map 2020*. Online Conference, July 4-5, 2020. doi: [10.5281/zenodo.3922054](https://doi.org/10.5281/zenodo.3922054)

- Szatmári, J., Kovács, F., van Leeuwen, B., Tobak, Z., Mezősi, G., Mucsi, L., **Juhász, L.**, Huszár, T., Kitka, G. (2014) Térinformatika a katasztrófavédelem szolgálatában (GIS for disaster management). In: Márkus, B (Ed.) *Térinformatika 2014: 20 éves a Térinformatika Tanszék.* (pp. 375-390) Székesfehérvár, Hungary (In Hungarian)

### **Datasets & Software**

- Juhász, L.** (2023). HomeRangeToolbox: v0.1 (ArcGIS Pro Toolbox to Compute Home-Ranges). Archived on Zenodo. doi: [10.5281/zenodo.7527682](https://doi.org/10.5281/zenodo.7527682)
- Hochmair, H.H., Benjamin, A., Gann, D., **Juhász, L.**, Olivas, P. & Fu, Z. (2021). Miami-Dade County Land Cover Map. *FIU Research Data Portal*. doi: [10.34703/gzx1-9v95/HK3EJK](https://doi.org/10.34703/gzx1-9v95/HK3EJK)
- Hochmair, H.H., Benjamin, A., Gann, D., **Juhász, L.**, Olivas, P. & Fu, Z. (2021). Areal Statistics of Urban Tree Canopy for the Miami-Dade Urban Area 2020. *FIU Research Data Portal*. doi: [10.34703/gzx1-9v95/1WWUEM](https://doi.org/10.34703/gzx1-9v95/1WWUEM)

### **Edited Volumes**

- Minghini, M., Li, H., Grinberger, A.Y., Liu, P., Yeboah, G., **Juhász, L.**, Coetzee, S. and Mooney, P., Sarretta, A. & Anderson, J. (Eds.) Proceedings of the OSM Science 2023. Antwerp, Belgium, 10-12 November 2023. Available at <https://zenodo.org/records/10443403>
- Minghini, M., Liu, P., Li, H., Grinberger, A.Y., & **Juhász, L.** (Eds.). Proceedings of the Academic Track at State of the Map 2022, Florence, Italy, 19-21 August 2022. Available at <https://zenodo.org/communities/sotm-22>
- Minghini, M., Coetzee, S., Grinberger, A.Y., **Juhász, L.**, Yeboah, G., Mooney, P. (Eds.). Proceedings of the Academic Track at the State of the Map 2020. Online Conference, July 4-6, 2020
- Minghini, M., Grinberger, A.Y., **Juhász, L.**, Yeboah, G., Mooney, P. (Eds.). Proceedings of the Academic Track at the State of the Map 2019. Heidelberg, Germany, September 21-23, 2019

### **Manuscripts in preparation**

- “Characterizing the impact of NeighborhoodHELP on COVID-19 related outcomes” - with Brown, Garba, Clarke (FIU CoM), Moise (Univ. of Miami)

## **RESEARCH GRANTS AND OTHER PROJECTS**

### **Externally funded projects**

2024 - 2026	<b>Florida Department of Environmental Protection.</b> Rookery Bay National Estuarine Research Reserve Sea Level Rise Vulnerability Assessment. \$159,000. (Co-PI w/ Parkinson & Ogurcak)
2025	<b>National Park Service.</b> <i>Phase II: Detection of bird nests using deep learning to support annual colonial bird monitoring efforts within Biscayne National Park.</i> \$9,000. (PI)
2024 - 2026	<b>Miami-Dade County Metropolitan Planning Organization.</b> <i>Equitable Transportation Assessment Planner (ETAP).</i> \$120,000. (Co-PI w/ Fu)
2023 - 2024	<b>National Park Service.</b> <i>Detection of bird nests using deep learning to support annual colonial bird monitoring efforts within Biscayne National Park.</i> \$40,000. (PI)
2022 - 2024	<b>Miami-Dade County Metropolitan Planning Organization.</b> <i>Transportation Outreach Planner (TOP) Phase IV.</i> \$120,000. (Co-PI w/ Fu)
2022 - 2023	<b>Environmental Protection Agency.</b> <i>Enhancing Living Shoreline Suitability Analysis to Optimize Resilience to Future Sea-Level Rise.</i> \$325,000. (Co-PI w/ Parkinson & Fu)
2020 - 2022	<b>Miami-Dade County Metropolitan Planning Organization.</b> <i>Transportation Outreach Planner (TOP) Phase III.</i> \$110,000. (Co-PI w/ Fu)



- 2020 - 2021 **Miami-Dade County, American Forests**, sub-award from *University of Florida*.  
*Miami-Dade Urban Tree Canopy Detection and Change Analysis*. \$22,000. (FIU PI)
- 2018 **University of Florida**. *Distance Education Minigrant for Geomatics Reusable Learning Object Development*. \$2,400. (Co-P w/ Hochmair)

#### **Other funding received (internal projects, scholarships, etc.)**

- 2024 - 2025 **FIU Population Health Initiative**. *Creating A Synthetic Data Ecosystems For AI-Enabled Simulation Modeling To Develop Evidence, Actionable Toolkits, and Strategic Frameworks For Reducing Population Health Consequences of Sea Level Rising in Miami*. \$45,000 (Co-PI w/ Talukder)
- 2018 **Austrian Marshall Plan Scholarship**. *Transatlantic Research support to visit Carinthia University of Applied Sciences*. \$8,000
- 2016 **University of Florida**. *IFAS Travel Grant*. \$200
- 2015 **ESRI** Travel Grant. \$450
- 2014 **CAMPUS Hungary**. *Mobility Scholarship to conduct research at JRC Ispra, Italy*. \$3,500

#### **Grant proposals under review**

- 2024-2025 **Amazon Science**. *Advancing Vandalism Detection in Collaborative Mapping Applications*. \$81,000 (PI)
- 2025-2028 **Environmental Protection Agency**. *Elucidation of coastal wetland resilience to climate change using site-specific topography, horizontal wetland migration rates and locally derived, scenario-based shoreline transgression*. \$1,136,000. (Co-PI)
- 2024-2025 **Ford Foundation**. *Human Layers in Mapping Security: Addressing Cartographic Vandalism Through Community Dynamics*. \$100,000 (PI)

#### **Consulting & Other project participation**

- 2023 **Miami Herald**. *Developing methodology to process and analyze geospatial data of publicly-funded tree planting and removal project*
- 2022 - 2023 **FIU Herbert Wertheim College of Medicine**. *Characterizing the impact of NeighborhoodHELP on COVID-19 related outcomes - Geospatial modeling*
- 2020 - present **FIU Jack G. Gordon Institute for Public Policy**. *Geospatial technology + Data science Lead for "Security Research Hub" project funded by U.S. Southern Command & Jack D. Gordon Institute for Public Policy*
- 2020 **University of Florida**. *"Spatial analysis and geovisualization with Python" - Reusable Learning Material development*
- 2019 - 2021 **FIU Architecture**. *Geospatial consultant for "Climate Resilient Urban Nexus Choices (CRUNCH)"*
- 2019 **University of Florida**. *"Web mapping technologies" - Reusable Learning Material development*

#### **HONORS & AWARDS**

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- 2024 Faculty Award for Notable Achievement. Florida International University Libraries
- 2020 Best paper of 2020 ("Cartographic Vandalism in the Era of Location-Based Games")  
Nominated for Jack Dangermond Award by *ISPRS Int. J. of Geo-Inf.*
- 2019 - 2020 Best Cover Story Award (2019 – 2020) for the story "Cartographic Vandalism in the Era of Location-Based Games" by *ISPRS International Journal of Geo-Information*

2019	Outstanding Reviewer Award by <i>ISPRS International Journal of Geo-Information</i>
2018	Best Analytical Poster Award. South Florida GIS Expo, West Palm Beach, FL
2017	Outstanding Merit Award. University of Florida CALS. Gainesville, FL
2016	3rd place - Best Full Paper Award, AGILE 2016. Helsinki, Finland
2015 - 2018	Certificate of Outstanding Academic Achievement for maintaining 4.0 GPA. University of Florida International Center

## **TEACHING**

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Fall 2024	CAP 5768 <b>Introduction to Data Science</b> , graduate, Florida International University, Knight Foundation School of Computing and Information Sciences
2020 - present	GIS 5050 <b>Environmental GIS</b> . graduate, FIU, Earth & Environment (yearly, Spring or Summer)
Spring 2023	GIS 5620 <b>GIS in Surveillance, Intelligence, and International Relations (GEOINT)</b> , graduate, FIU
F2016, F2018	<b>GIS Programming &amp; Customization</b> . Graduate, University of Florida. TA
2013, 2014	<b>Spatial Data Acquisition and Surveying</b> . Undergraduate, University of Szeged. TA
2013	<b>Introduction to Geographic Information Systems (lab)</b> . Undergraduate, University of Szeged. TA

### **Short courses developed & taught**

2024	<b>Geographic Information Systems (GIS) and Spatial Analysis for Public Health: An Introduction</b> . Full-day workshop. FIU RCMI. Co-instructor: Xu (FIU)
2022	<b>Next Generation Geospatial Data Management with PostgreSQL/PostGIS</b> 2-day intensive workshop. Florida International University
2021, 2022	<b>Working with Volunteered and Crowdsourced Geographic Information (V&amp;CGI)</b> . 2-week e-learning course. European Spatial Data Research (EuroSDR) EduServ initiative. Co-instructor: P. Mooney (Maynooth University)

### **Guest lectures**

1. **Fundamentals of Spatial Data Science**. Course: *GIS Analysis*. University of Szeged, Hungary, Department of Physical Geography & Geoinformatics. Szeged, Hungary. Instructors: Szatmari, Mucsi & Tobak (11/12/2024)
2. **Open Source Geographic Information Systems**. Course: *Surveillance, Intelligence and International Relations*. FIU, Steven J. Green School of International and Public Affairs. Miami, FL. Instructor: Ter-Ghazarian (4/8/2021)
3. **Open Source geospatial scripting**. Course: *GIS Programming & Customization*. University of Florida, Geomatics Program. Gainesville, FL. Instructor: Hochmair (12/4/2020)
4. **Advanced Python libraries for spatial analysis**. Course: *GIS Programming & Customization*. University of Florida, Geomatics Program. Gainesville, FL. Instructor: Hochmair (11/20/2020)
5. **Web mapping – Building interactive web maps with JS libraries**. Course: *Digital Mapping*. University of Florida, Geomatics Program. Gainesville, FL. Instructor: Hochmair. (11/01/2019)

**6. Introduction to Web mapping – Protocols and Standards.**

*Course: Digital Mapping. University of Florida, Geomatics Program. Gainesville, FL. Instructor: Hochmair. (10/25/2019)*

**7. PostGIS for storing, processing and analyzing social media data and Volunteered Geographic Information.**

*Course: Next Generation Data Management in Movement Ecology. University of Florida, Dept. of Wildlife Ecology and Conservation. Instructor: Basille. Davie, FL [\[link\]](#) (6/6/2016)*

**Invited talks and panel discussions**

1. **Open Data and Free & Open-Source Geospatial Software in the United States.** FOSS4G Hungary Annual Meeting. Budapest University of Technology, Hungary (in Hungarian). (5/31/2024)
2. **“Utilizing Large Language Models in Geographic Contexts - Experiences from the FIU GIS Center”.** South Florida GIS Expo. West Palm Beach, FL (08/22/2023) [\[link\]](#)
3. **“AI, Higher Ed, and Libraries”** (Panelist), Florida International University
4. **Drawn by the Neogeography Revolution.** Új Földrajzi Forradalom. GIS Day. University of Szeged, Hungary. (in Hungarian). (11/17/2021)
5. **Understanding Visitation Patterns to POIs During a Natural Disaster.** Placekey Community Seminar Series. Placekey Community Research Seminars. Online [\[link\]](#) (5/18/2021)
6. **#FloodTrackerMIA - A Data-Driven Approach to Increase Resilience to Coastal Flooding in the Greater Miami Area.** Knowledge Graphs in Action: DBpedia, Linked Geodata and Geo-information Integration. Online conference [\[link\]](#) (10/6/2020)
7. **The good, the bad and the ugly: Different angles of scholarly peer-review.** FIU Libraries Peer Review Symposium. Miami, FL [\[link\]](#) (6/4/2020)
8. **The Development of the Integrated Decision Support System (IDDS).** Climate Resilient Urban Nexus Choices (CRUNCH) Progress Meeting. Miami, FL (Online). (5/2/2020)
9. **Coral Gables Sea Level Rise Impact Planning Tool.** South Florida Water Management District. West Palm Beach, FL (12/19/2019)
10. **Data-Driven Sea Level Rise Applications.** South Florida GIS Expo. West Palm Beach, FL (08/22/2019)
11. **How do we use different (geo-)social media services?** GIScience Lecture Series. Carinthia University of Applied Sciences. Villach, Austria [\[link\]](#) (6/5/2018)
12. **Analyzing individual user activities in multiple geo-social media and mapping platforms.** VGI and Social Media for the Urban Context Mini-Conference. University of Salzburg. Austria (5/4/2018)
13. **Building the community in South Florida.** State of the Map US 2017. University of Colorado, Boulder. Boulder, CO (10/20/2017)
14. **Analyzing Mapillary, a crowdsourced street level photo service.** Broward County GIS Group meeting. Fort Lauderdale, FL (7/25/15)

**STUDENT ADVISING AND MENTORING**

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**Graduate student advising**

- Pedro Medina (Fall 2024 - ongoing). MS in Data Science & Artificial Intelligence, Capstone Project mentor. Project: Predicting Crime Hot-spots in Florida using Machine Learning
- Luis Garcia Falcon (2024 - ongoing). PhD in Geography, committee member.
- Victoria Ortiz (2024 - ongoing). MS in Geosciences, committee member. Topic: *Analyzing the Relationship Between Land Characteristics and the Spatial and Temporal Variations of Particulate Matter 2.5 Concentrations in Austin Texas*



- Tendai Gwanzura (2022 - ongoing). PhD in Epidemiology, committee member. *Topic: Identifying individual and community factors associated with high COVID-19 incidence and mortality rates among people with HIV*

### **Other mentoring & supervision of internships**

- Jorge Corcino, Fall 2024 - present (MS in Data Science & Artificial Intelligence)
- Vedant Sharan, Fall 2024 - present (High School senior)
- Don Daxton, Fall 2023 - present (BS Environmental Engineering)
- Leila Camplone, Fall 2023 - Summer 2024 (BS Crime Science)
- Flora Beleznay, Spring 2023 - Summer 2023 (BS Environmental Science)
- Mei Hamaguchi, Fall 2022 - Summer 2023 (BS Environmental Science)
- Krystle Barnes, Fall 2022 (BS Environmental Science)
- Jesse Velazquez, Fall 2022 (BS Biology)
- Tatiana Summerall, Spring 2022 – Fall 2022 (BS Computer Science)
- Emily Herrera, Summer 2021 (PSM Environmental Policy & Management)
- Mariangelica Banasco, Summer 2020 (PSM Environmental Policy & Management)
- Samantha Morejon, Summer 2020 (PSM Environmental Policy & Management)
- Adeola Kolapo-Oluwo, Summer 2020 (PSM Environmental Policy & Management)

## **SERVICE**

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### **Service to profession**

- Expert Reviewer, United Nations Global Environment Outlook Report 7 (UN GEO-7), 2024 - 2025
- Program Committee member, 8th International Conference on Computer-Human Interaction Research and Applications - CHIRA 2024, Porto, Lisbon
- Special Issue guest editor: Advances in AI-Driven Geospatial Analysis and Data Generation (ISPRS International Journal of Geo-Information) (with Hochmair & Li)
- Member, Scientific Committee, OSMScience 2023 Conference (@ SotM EU). Antwerp, Belgium
- Member, Scientific Committee, State of the Map 2022. Florence, Italy. 2022 August 19 - 21
- Co-Chair, Academic Track at State of the Map 2020. Cape Town, South Africa (moved Online). 2020 July 3-5
- Co-chair, Academic Track at the State of the Map 2019. Heidelberg, Germany. 2019 September 14-16
- Co-chair: VGI HATCh: Using Volunteered Geographic Information for Help and Assistance in Transport and Humanitarian operations. 22nd AGILE Conference on Geo-information Science. Cyprus University of Technology, Limassol, Cyprus (Canceled) (2019)
- Local organizing team member: LINK-VGI: LINKing and analyzing Volunteered Geographic Information (VGI) across different platforms. 19th AGILE Conference on Geographic Information Science. University of Helsinki, Helsinki, Finland (2016)
- Special Issue guest editor: Advances in Social Network Analysis – Spatio-Temporal and Semantic Methods (ISPRS International Journal of Geo-Information) (with Hochmair and Resch)
- Special Issue guest editor: OpenStreetMap as a multi-disciplinary nexus: Perspectives, Practices, and Procedures (ISPRS International Journal of Geo-Information) (with Minghini, Grinberger, Mooney, and Yeboah)

- Manuscript reviewer for: *Transactions in GIS, The Professional Geographer, Open Geospatial Data, Software and Standards, Remote Sensing, ISPRS International Journal of Geo-Information, Urban Science, PLOS ONE, International Journal of Spatial Data Infrastructures Research, GEOProcessing 2019 Conference, ISPRS Congress 2020, 2021, Geo-spatial Information Science, International Journal of Applied Earth Observation and Geoinformation, International Health, Journal of Spatial Information Science, European Journal of Geography, Energy Research & Social Science, International Journal of Geographical Information Science, Expert Systems with Applications, International Journal of Digital Earth, International Journal of Human-Computer Interaction*

### **Institutional service**

- Search Committee for Open Educational Resources Librarian at FIU, Member (2024)
- Ad-Hoc Committee to Revise Faculty Evaluation Methods, FIU Libraries, Member (2023 - present)
- Dean's Technology Development Task Force, FIU Libraries, Member (2022 - 2023)
- Search Committee "Application Developer II", FIU Libraries, Member (2022)
- Peer-Review & Research Committee, FIU Libraries, Member (2021 – 2022)
- Search Committee "Geospatial Web Developer II", FIU Libraries, Member (2021)
- Search Committee "Cloud Engineer", FIU Libraries, Member (2021)
- GIS Advisory Committee, Member (2020 – present)
- Merit Committee, FIU Libraries, Member (2020-2021, 2023)
- CALS Graduate Teaching and Advising Award Selection Committee, member. University of Florida (2018)

### **Community involvement and service**

- Vice President, Board of Directors, OpenStreetMap US (2024 - present)
- Elected Charter Member, OsGeo (Open Source Geospatial Foundation, 2023 - present)
- Co-organizer, Maptime Miami (2017 - 2020, 2024 - present)
- Volunteer Mentor, CoderDojo Plantation (2016 - 2018)

### **PROFESSIONAL MEMBERSHIPS**

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- ACM SIGSPATIAL - Special Interest Group on Spatial Information
- IEEE - Member of: Computer Society; Systems, Man, and Cybernetics Society
- International Society for Photogrammetry and Remote Sensing (ISPRS)
- American Association of Geographers (AAG)
- Florida Society of Geographers (FSG)
- Hungarian Geographical Society (MFT)
- OpenStreetMap Foundation (OSMF), Voting member
- OpenStreetMap US

### **IN THE NEWS**

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- April 2024: EXPOSED: Miami-Dade County's urban tree project unable to shade residents from record heat. *Miami Herald*.  
<https://www.miamiherald.com/news/local/environment/climate-change/article276415291.html>
- June 2022: L'isola che (non) c'è [in Italian]. Interview and story by *Zeta Luiss*.  
<https://zetaluiss.it/2022/06/05/null-island-equatore/>

- May 2022: MapLab: Inside Null Island, ‘the Most Real of Fictional Places’. Interview and story by *Bloomberg CityLab*.  
<https://www.bloomberg.com/news/newsletters/2022-05-04/maplab-inside-null-island-the-most-real-of-fictional-places>
- September 2020: Online COVID-19 Maps and the ‘Infodemic’. *GIS Lounge*.  
<https://www.gislounge.com/online-covid-19-maps-and-the-infodemic/>
- August 2020: GIS researcher Levente Juhász examines online maps and their inaccuracies during COVID-19 pandemic. *FIU News*.  
<https://news.fiu.edu/2020/mapping-covid-19-an-interview-with-gis-researcher-levente-juhasz>
- April 2020: Article titled “Cartographic Vandalism in the Era of Location-Based Games” was promoted as the cover story of *ISPRS International Journal of Geo-Information* Vol.9 Iss. 4.  
<https://www.mdpi.com/2220-9964/9/4>
- December 2019: How Artists and Scientists Are Tackling Miami’s Rising Sea Levels. *Tech Insider*.  
[https://news.fiu.edu/2020/fiu-libraries-gis-experts-featured-in-new-tech-insider-piece-highlighting-t  
he-joint-effort-between-artists-and-scientist-in-bringing-awareness-to-rising-sea-levels-in-miami](https://news.fiu.edu/2020/fiu-libraries-gis-experts-featured-in-new-tech-insider-piece-highlighting-the-joint-effort-between-artists-and-scientist-in-bringing-awareness-to-rising-sea-levels-in-miami).  
(50k views as of January 2023)