MARINA VICENS-MIQUEL

Texas A&M University–Corpus Christi (TAMUCC)
Department of Computing Sciences
mvicensmiquel@islander.tamucc.edu

EDUCATION

Ph.D.	Texas A&M University–Corpus Christi, expected 2024 Geospatial Computer Science Ph.D. Program	Current GPA: **3.92**
B.S.	Texas A&M University–Corpus Christi, May 2020 Double Major: Computer Science, Mathematics *Magna Cum Laude*	

RESEARCH EXPERIENCE

2020 – Current	NSF AI Institute: Artificial Intelligence for Environmental Sciences (AI2ES) Graduate Research Assistant, Conrad Blucher Institute at TAMUCC *Research in Wet/Dry Shoreline GeoDetection using Deep Learning, and Water Level and Inundation Prediction using Deep Learning*
2020	Research Intern at Lone Star UAS Center (LSUASC) *Research in UAV Damage Assessment using Deep Learning*
2019	COSC Capstone Research Project *Constructed a Deep Learning Neural Network for Detecting Logo Images with Over 99% Accuracy*

PUBLICATIONS

2022	**Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. A Deep Learning Based Method to Delineate the Wet/Dry Shoreline and Compute its Elevation Using High-Resolution UAS Imagery. Remote Sensing MDPI. 14(23), 5990. DOI: 10.3390/rs14235990.
2022	**Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Deep Learning Automatic Detection of the Wet/Dry Shoreline at Fish Pass, Texas. 2022 International Geoscience and Remote Sensing Symposium (IGARSS), Kuala Lumpur, Malaysia, 17-22, 2022. DOI: 10.1109/IGARSS46834.2022.9884633.
2018	Rahnemoonfar, Maryam; Robin, Murphy; **Vicens-Miquel, Marina**; Dobbs, Dugan; Adams, Ashton. Flooded Area Detection from UAV Images Based on Densely Connected Recurrent Neural Networks. International Geoscience and Remote Sensing Symposium (IGARSS), Valencia, Spain, July 22-27. DOI: 10.1109/IGARSS.2018.8517946.

CONFERENCE PRESENTATIONS AND INVITED TALKS

2023	**Vicens-Miquel, Marina**; Tissot, Philippe; Medrano, Antonio. Physics-Based Deep Learning Architectures for Water Level Predictions. To be presented at

the American Association of Geographers Annual Meeting, Denver, CO, USA, March 23-27.

2023 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid. Deep Learning Architectures for Water Level Predictions. Oral presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2023 Kastl, Matthew; Mahlke, Hugo; Pilartes-Congo, Jose; **Vicens-Miquel, Marina**; Salazar, Josh; Nguyen, Son; Tissot, Philippe. Pier Mounted Stereo Cameras to Measure Time Series of Total Water Levels. Poster presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2023 Duff, Christian; Woodall, Jarett; Tissot, Philippe; White, Miranda; **Vicens-Miquel, Marina**. Long Short-Term Memory Predictions of Water Temperature for Cold Stunning Events. Poster presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2023 Marines, Ashley; Ramirez, Dante; **Vicens-Miquel, Marina**; Tissot, Philippe. Comparison of Machine Learning Models for Prediction of Water Level at Tide Gauge. Poster presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2023 Millien, Judy; Edwards, Davey; Colburn, Katie; **Vicens-Miquel, Marina**; Pilartes-Congo, Jose; Stephenson, Savannah; Tissot, Philippe. Change Analysis of Time Series of Beach Digital Elevation Models and Shoreline Wet/Dry Lines. Poster presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2023 Colburn, Katie; Tissot, Philippe, **Vicens-Miquel, Marina**. Comparison of Human Delineated Ocean Beach Wet/Dry Shorelines with AI Predictions. Poster presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2023 Pilartes-Congo, Jose; **Vicens-Miquel, Marina**; Starek, Michael; Tissot, Philippe. Application of Close-Range Stereophotogrammetry for Predicting Coastal Inundation. Poster presentation at the American Meteorological Society Annual Meeting, Denver, CO, USA, January 8-12.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Generalized Model for Wet/Dry Shoreline Detection and Total Water Level Elevation Using Deep Learning. Poster presentation at the AGU Fall Meeting 2022, Chicago, IL, USA, December 12-16.

2022 Pilartes-Congo, Jose; **Vicens-Miquel, Marina**; Garcia, Isabel; Starek, Michael; Tissot, Philippe. Examining Different Photogrammetry and LiDAR Methodologies for Monitoring Coastal Elevation and Shoreline Changes. Poster presentation at the AGU Fall Meeting 2022, Chicago, IL, USA, December 12-16.

2022 **Vicens-Miquel, Marina**; Tissot, Philippe; Medrano, Antonio. Deep Learning Architectures to Improve Coastal Water Level Predictions. Oral presentation at the 2022 ASBPA National Coastal Conference, Long Beach, CA, USA, September 13-16.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Generalized Model for Wet/Dry Shoreline Detection Using Deep Learning. Poster presentation at the 2022 ASBPA National Coastal Conference, Long Beach, CA, USA, September 13-16.

2022 Pilartes-Congo, José; **Vicens-Miquel, Marina**; Kastl, Matthew; Starek, Michael; Tissot, Philippe. Monitoring Changes in Shoreline and Coastal Elevation Using a ZED 2i Stereo Camera. Poster presentation at the 2022 ASBPA National Coastal Conference, Long Beach, CA, USA, September 13-16.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Deep Learning Automatic Detection of the Wet/Dry Shoreline at Fish Pass, Texas. Oral presentation at the 2022 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Kuala Lumpur, Malaysia, July 17-22.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Deep Learning Generalized Model for Wet/Dry Shoreline Detection. Oral presentation at the 2022 Texas Coastal Symposium, Corpus Christi, TX, USA, April 14.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Georeferenced AI Wet/Dry Shoreline Detection using UAV Imagery. Oral presentation at the ESRI Imagery and Remote Sensing Summit, Virtual, March 31.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Automated Wet/Dry Shoreline Delineation Using Deep Learning. GeoAI and CyberGIS for Advancing Spatial Decision Making. Oral presentation at the American Association of Geographers Annual Meeting, New York, NY, USA, February 25 – March 1.

2022 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Deep Learning Wet/Dry Shoreline Detection Using UAV Imagery. Oral presentation at the American Meteorological Society Annual Meeting, Houston, TX, USA, January 23-27.

2021 **Vicens-Miquel, Marina**; Medrano, Antonio; Tissot, Philippe; Kamangir, Hamid; Starek, Michael. Wet/Dry Shoreline Detection Using Deep Learning. Oral presentation at the 2021 ASBPA National Coastal Conference, New Orleans, LA, USA, September 28 – October 1.

2018 Rahnemoonfar, Maryam; Robin, Murphy; **Vicens-Miquel, Marina**; Dobbs, Dugan; Adams, Ashton. Flooded Area Detection From UAV Images Based on Densely Connected Recurrent Neural Networks. Oral presentation at the 2018

IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Valencia, Spain, July 22-27.

HONORS AND AWARDS

2022 – 2023	TAMUCC International Presidential Graduate Research Scholarship ($4,000)
2022 – 2023	TAMUCC College of S&E Graduate Research Scholarship ($1,000)
2022 – 2023	TAMUCC College of Engineering Graduate Research Scholarship ($1,041.67)
2022 – 2023	TAMUCC Geospatial Engineering Graduate Research Scholarship ($500)
2021 – 2022	TAMUCC International Presidential Graduate Research Scholarship ($4,000)
2021 – 2022	TAMUCC College of S&E Graduate Research Scholarship ($2,000)
2021 – 2022	TAMUCC Geospatial Engineering Graduate Research Scholarship ($600)
2020 – 2021	TAMUCC International Presidential Graduate Research Scholarship ($3,141)
2020 – 2021	TAMUCC College of S&E Graduate Research Scholarship ($1,000)
2020 – 2021	TAMUCC Division of Research and Innovation Student Research Competition Award ($800)
2020 – 2021	TAMUCC Geospatial Engineering Graduate Research Scholarship ($1,000)
2019 – 2020	Athletic Department 5th Year Scholarship ($10,312.49)
2019 – 2020	Ruth A. Campbell School Endowed Scholarship ($500)
2019 – 2020	Evening Post Pub Co.–KRIS TV Scholarship ($500)
2019 – 2020	Exxon USA Found Scholarship ($500)
2018 – 2019	M Collins UG Scholarship ($8,400)
2015 – 2020	6-time Dean’s List Recipient
2015 – 2020	8-time Athletic Department Academic Roll Recognition
2015 – 2018	3-time Scholar Student-Athlete