David P Retchless

Contact Information

Building: Ocean and Coastal Sciences Building (OCSB)

Room: 361

Street 1: 200 Seawolf Parkway

City: Galveston State or Province: TX Zip / Postal Code: 77554

Email Address: retchled@tamu.edu Secondary Email: retchled@tamug.edu

Work Phone: (409)741-7130

Degrees

Degree: Ph.D.
Year Conferred: 2015
Discipline: Geography

Granting Institution: Pennsylvania State University

Level of Degree: Doctoral Highest Degree Earned: Yes Terminal Degree: Yes

Degree: M.S.

Year Conferred: 2011 Discipline: Geography

Granting Institution: Pennsylvania State University

Level of Degree: Masters **Highest Degree Earned:** No **Terminal Degree:** No

Degree: B.A.

Year Conferred: 2004 Discipline: Liberal Studies

Granting Institution: University of Notre Dame

Level of Degree: Bachelors Highest Degree Earned: No Terminal Degree: No

Current Position

Position Title: Associate Professor

Start Date: 2023-09-01

Texas A&M - Rank and Promotion History

Effective Date of Rank: 2023-09-01 Faculty Title: Associate Professor Tenure Classification: Tenured

Department: Marine and Coastal Environmental Science **College:** College of Marine Sciences & Maritime Studies

Percent Effort: 100.00

Effective Date of Rank: 2015-09-01 End Date of Rank: August 2023 Faculty Title: Assistant Professor

Tenure Classification: Tenure-Track (not tenured) **Department:** Marine and Coastal Environmental Science

College: Texas A&M University at Galveston

Percent Effort: 100.00

Publications, Conference Proceedings, Patents and Creative Products/Innovations

- 1. Miglietta, Maria P., Alexandra Frolova, and David P. Retchless. "Habitat Suitability Modeling of Aurelia Jellyfish (Cnidaria, Scyphozoa) in the Gulf of Mexico Suggests Distinct Species' Distributions Based on Tolerance Limits." *Marine Biology*, 2024.
- 2. Li, Shoujia, Ge Gao, Xinyue Ye, Jiaxin Du, Zhenhang Cai, Galen D. Newman, and David P. Retchless. "3D Visualization of Hurricane Storm Surge Impact on Urban Infrastructure." *Urban Informatics* 3 (2024): 14. doi:https://doi.org/10.1007/s44212-024-00043-x.
- 3. Ye, Xinyue, Chunwu Zhu, Jiaxin Du, Zhiheng Hu, Yang Shen, and David P. Retchless. "Simulating Urban Energy Use Under Climate Change Scenarios and Retrofit Plans in a Coastal Texas Community." *Urban Informatics* 3 (2024): 16.
- 4. Ye, Xinyue, Galen D. Newman, W Zhai, David P. Retchless, S Das, Youngjib Ham, Lei Zou, X Huang, and Zhe Zhang. "Towards Coastal Infrastructure Resiliency: An AI-Enabled Decision-Support Framework for Multi-Scale Comprehension and Stakeholder Empowerment" *Proceedings of American Philosophical Society*, 2025.
- 5. Thatcher, Jim, Carolyn Fish, and David P. Retchless. "Dueling Cartographies: Science, Positivism, Art, and Critical Praxis." *International Journal of Cartography*, 2024, 18. doi:https://doi.org/10.1080/23729333.2024.2338496.
- 6. Gao, Ge, Xinyue Ye, Shoujia Li, Xaio Huang, Huan Ning, David P. Retchless, and Zhenlong Li. "Exploring Flood Mitigation Governance by Estimating First-Floor Elevation via Deep Learning and Google Street View in Coastal Texas." *Environment and Planning B: Urban Analytics and City Science*, 2023. doi:https://doi.org/10.1177/23998083231175681.
- 7. Wellbrock, Nicholas, Nathalie Jung, David P. Retchless, Timothy M. Dellapenna, and Victoria L. Salgado. "Introducing ICEDAP: An 'Iterative Coastal Embayment Delineation and Analysis Process' with Applications for the Management of Coastal Change." *Remote Sensing* 15 (2023): 4034. doi:https://doi.org/10.3390/rs15164034.
- 8. Ye, Xinyue, Jiaxin Du, Yu Han, Galen D. Newman, David P. Retchless, Lei Zou, Youngjib Ham, and Zhenhang Cai. "Developing Human-Centered Urban Digital Twins for Community Infrastructure Resilience: A Research Agenda." *Journal of Planning Literature* 38 (2023): 187–99. doi:https://doi.org/10.1177/08854122221137861.
- 9. Cai, Zhenhang, Galen D. Newman, Jaekyung Lee, Xinyue Ye, David P. Retchless, Lei Zou, and Youngjib Ham. "Simulating the Spatial Impacts of a Coastal Barrier in Galveston Island, Texas: A Three-Dimensional Urban Modeling Approach." *Geomatics, Natural Hazards, and Risk* 14 (2023): 2192332.
- 10. Husain, Alisha, Kristine Jones, Anthony Kolshorn, David Retchless, Kelemua Tesfaye, Courtney M. Thatcher, and Jim Thatcher. "Mappering Mecklenburg County: Exploring Census Data for Potential Communities of Interest," 245--264. Springer International Publishing Cham, 2022.
- Retchless, David P., and Ashley D. Ross. "Effects of Temporal Framing and Hazard Experience on Receptivity to Hurricane Risk Messages: A Survey of US Gulf Coast Residents." Frontiers in Communication 7 (2022): 18. doi:https://doi.org/10.3389/fcomm.2022.1020935.
- 12. Retchless, David, Carolyn Fish, and Jim Thatcher. "Climate Change Communication beyond the Digital Divide: Exploring Cartography's Role and Privilege in Climate Action." *Journal of Environmental Media* 3 (2022): 101--123.
- 13. Du, Jiaxin, Xinyue Ye, Galen Newman, and David Retchless. "Network Science-Based Urban Forecast Dashboard." In Proceedings of the 5th ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities, 2022.
- 14. Ritt, Benjamin, Glenn A. Jones, and David Retchless. "Sand and Social Distancing: A UAS Study of Galveston, TX, Beach Attendance during COVID-19." Shore & Beach 89 (2021): 3.
- 15. Retchless, David, William Mobley, Meri Davlasheridze, Kayode Atoba, Ashley D. Ross, and Wesley Highfield. "Mapping Cross-Scale Economic Impacts of Storm Surge Events: Considerations for Design and User Testing." *Journal of Maps* 17 (2021): 123-135.
- 16. Thatcher, Jim, David Retchless, Courtney Thatcher, and Kristine Jones. "Putting Mapper on a Map: Cartographic Visualizations of Topological Data Analysis." *Abstracts of the ICA* 3 (2021): 288.
- 17. Sterne, Travis Keenan, David Retchless, Rebecca Allee, and Wesley Highfield. "Predictive Modelling of Mesophotic Habitats in the North-Western Gulf of Mexico." *Aquatic Conservation: Marine and Freshwater Ecosystems* 30 (2020): 846--859.
- 18. Retchless, David P. "Determinants of Hurricane Evacuation from a Large Representative Sample of the U.S. Gulf Coast." *International Journal of Environmental Research and Public Health* 16 (2019): 4268–4268. doi:10.3390/ijerph16214268.
- 19. Retchless, David P. "Understanding Local Sea Level Rise Risk Perceptions and the Power of Maps to Change Them: The Effects of Distance and Doubt." *Environment and Behavior* 50 (2018): 483–511. doi:10.1177/0013916517709043.
- 20. Retchless, David P. "Bringing the Big Data of Climate Change down to Human Scale: Citizen Sensors and Personalized Visualizations in Climate Communication." In *Thinking Big Data in Geography: New Regimes, New Research*, 197–213, 2018.
- 21. Retchless, David P. "Domains of Uncertainty Visualization Research: A Visual Summary Approach." *Cartography and Geographic Information Science* 44 (2017): 296–309. doi:10.1080/15230406.2016.1154804.
- 22. Retchless, David P. "Preparing Geographers for Interdisciplinary Research: Graduate Training at the Interface of the Natural and Social Sciences." *Professional Geographer* 69 (2017): 107–16. doi:10.1080/00330124.2016.1184985.

23. Retchless, David P. "Guidance for Representing Uncertainty on Global Temperature Change Maps." *International Journal of Climatology* 36 (2016): 1143–59. doi:10.1002/joc.4408.

Grants & Contracts

Title: EAGER: SAI-E: Synchronizing Decision-Support via Human- and Social-centered Digital Twin Infrastructures for Coastal

Communities

Sponsor: Texas A&M University/National Science Foundation

Grant ID / Contract ID: 2104998

Start Date: 2021-09-01 End Date: 2023-08-31 Period Length: 2 Period Unit: Year Indirect Funding: 1 Total Funding: 11316

Total Direct Funding: 5488.26

Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless CoPI with Galen D Newman CoPI, Lei Zou CoPI, Xinyue Ye PI, Youngjib Ham CoPI

Status: Completed

Title: ReDDDoT Phase 2: Responsible Design and Development of Equitable Intelligent Systems for Multi-Hazard Resilience

Sponsor: William Marsh Rice University/National Science Foundation

Grant ID / Contract ID: 2405706

Award Date: 2024-09-01 Start Date: 2024-09-01 End Date: 2027-09-01 Period Length: 1 Period Unit: Year Indirect Funding: Total Funding: 221914 Currency Type: USD Number of Periods: 3

Collaborators: David P Retchless CoPI

Status: Funded - In Progress

Title: RESTORE Centers of Excellence: Towards Targeted Risk Mitigation: Community Engaged, Fast Impact Estimation of

Extreme Weather using Big Social and Climate Data

Sponsor: Texas A&M University - Corpus Christi #760/Texas Commission On Environmental Quality

Grant ID / Contract ID: M2401891

Start Date: 2024-01-01 End Date: 2025-12-31 Period Length: 2 Period Unit: Year Indirect Funding: 1 Indirect Cost Rate: 52.5 Total Funding: 532988

Total Direct Funding: 253169.3

Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless (80%) PI with Wesley E Highfield (20%) CoPI

Status: Funded - In Progress

Title: Texas Natural Hazard Risk Assessment (Enhanced State Hazard Mitigation Plan - Task 2. Statewide Hazard Data

Collection and Analysis) (GLO Contract No. 21-125-000-C775)

Sponsor: Texas Division of Emergency Management/

Grant ID / Contract ID: M2103039

Start Date: 2021-06-01 End Date: 2023-10-31 Period Length: 3 Period Unit: Year Indirect Funding: 1 Total Funding: 1950017

Total Direct Funding: 1209010.54

Currency Type: USD

Number of Periods: 1

Collaborators: David P Retchless (16.65%) CoPI with Ashley D Ross (16.65%) CoPI, Wesley E Highfield (16.65%) CoPI

Status: Completed

Title: Acquiring Hurricane Dorian MAXAR Imagery for Coastal Resilience Research

Sponsor: Texas A&M University at Galveston Texas Comprehensive Research Fund (TCRF)

Start Date: 2023-05-15
End Date: 2023-08-15
Period Length: 3
Period Unit: Month
Indirect Funding:
Total Funding: 9844
Currency Type: USD
Number of Periods: 1

Collaborators: David P Retchless PI

Status: Completed

Title: Coastal Flood Visualization with Mobile Virtual and Augmented Realities for Risk Communication

Sponsor: Texas A&M University T3 program

Start Date: 2021-01-01 End Date: 2022-12-31 Period Length: 2 Period Unit: Year Indirect Funding: Total Funding: 32000 Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless PI with Galen D Newman CoPI, Xinyue Ye CoPI

Status: Completed

Title: Coastal Flood Spotter: A Human Sensors Based Approach to Enhancing Preparedness for Flooding in the Houston-

Galveston Metro Region

Sponsor: Texas A&M University at Galveston Texas Comprehensive Research Fund for Pilot Projects (TCRF)

Start Date: 2022-02-01
Period Length: 7
Period Unit: Month
Indirect Funding:
Total Funding: 16508
Currency Type: USD
Number of Periods: 1

Collaborators: David P Retchless PI with William J Merrell CoPI

Status: Completed

Title: Texas Disaster Information System (TDIS)

Sponsor: Texas General Land Office **Grant ID / Contract ID:** 2107802

Start Date: 2021-10-01 End Date: 2024-06-30 Period Length: 3 Period Unit: Year Indirect Funding: 1 Total Funding: 8500000 Total Direct Funding: 5270000

Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless CoPI with Yoonjeong Lee Other, Wesley E Highfield CoPI

Status: Funded - In Progress

Title: Learning from Hurricane Laura s Near Miss on Houston-Galveston: Evacuation Decision Making in an Environment of

Compounding Uncertainties and Political Polarization **Sponsor:** Natural Hazards Center, University of Colorado

Grant ID / Contract ID: 2103769

Start Date: 2021-02-01 End Date: 2021-12-31 Period Length: 11 Period Unit: Month Indirect Funding: Total Funding: 7500 Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless PI with Ashley D Ross CoPI

Status: Completed

Title: TDEM Spatial Flood Analysis Project

Sponsor: Texas Division of Emergency Management

Grant ID / Contract ID: M2201106

Start Date: 2021-07-09
End Date: 2023-05-22
Period Length: 3
Period Unit: Year
Indirect Funding:
Total Funding: 2368965
Currency Type: USD
Number of Periods: 1

Collaborators: David P Retchless (35%) CoPI with Wesley E Highfield (35%) PI, Samuel D Brody (25%) CoPI, William J Merrell

(5%) CoPI

Status: Funded - In Progress

Title: Evaluating the Effects of a Coastal Spine: National-Level Economic Ripples and Effects on Flood Insurance

Sponsor: Texas General Land Office/Department of Housing and Urban Development

Grant ID / Contract ID: M1703535

Start Date: 2017-09-01 End Date: 2019-05-15 Period Length: 2 Period Unit: Year Indirect Funding: 1 Indirect Cost Rate: 15 Total Funding: 1594189

Total Direct Funding: 1355060.65

Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless (14%) CoPI with Ashley D Ross-Wootton (14%) CoInvestigator, Meri Davlasheridze (14%) CoPI, Samuel D Brody (15%) CoPI, William J Merrell (15%) CoPI, Wesley E Highfield (14%) PI, Leonard D Waterworth (14%)

Colnvestigator **Status:** Completed

Title: A Survey on Natural Hazard Literacy

Sponsor: Texas A&M University at Galveston Texas Comprehensive Research Fund (TCRF)

Start Date: 2017-05-01 End Date: 2017-08-31 Period Length: 4 Period Unit: Month Indirect Funding: Total Funding: 8000 Currency Type: USD Number of Periods: 1

Collaborators: David P Retchless CoPI with Ashley D Ross PI

Status: Completed

Title: Acquisition of high-resolution bathymetric and topographic surveying technology (HydroLite-DFX) for teaching and

esearch

Sponsor: Texas A&M University at Galveston Texas Comprehensive Research Fund (TCRF)

Start Date: 2017-05-01 End Date: 2017-08-31 Period Length: 4 Period Unit: Month Indirect Funding: Total Funding: 15450 Currency Type: USD

Number of Periods: 1

Collaborators: David P Retchless CoPI with Wesley E Highfield CoPI, Peter J Van Hengstum PI

Status: Completed

Teaching (Custom Section)

Start Term: 2023/02

Course Title: INTRO TO GIS Course: MARS 325 401

Credit Hours: 3 Lab Hours: 2

Instruction Mode: TR Lecture Hours: 2

Student Credit Hours: 48

Enrollment: 16
Start Term: 2023/02

Course Title: ADV GIS FOR COASTAL SYSTEMS

Course: MARS 626 600 Credit Hours: 3 Lab Hours: 2 Instruction Mode: TR Lecture Hours: 2

Student Credit Hours: 24

Enrollment: 8
Start Term: 2023/02
Course Title: RESEARCH
Course: MARS 691 605
Credit Hours: 12
Instruction Mode: NT
Student Credit Hours: 30

Enrollment: 4
Start Term: 2023/01
Course Title: RESEARCH
Course: MARS 491 411
Credit Hours: 4

Credit Hours: 4
Instruction Mode: NT
Student Credit Hours: 3

Enrollment: 1
Start Term: 2023/01

Course Title: DIRECTED STUDIES

Course: MARS 685 604 Credit Hours: 4 Instruction Mode: NT Student Credit Hours: 7

Enrollment: 2
Start Term: 2023/01
Course Title: RESEARCH
Course: MARS 691 609
Credit Hours: 12
Instruction Mode: NT
Student Credit Hours: 27

Enrollment: 4

Start Term: 2022/03

Course Title: RESEARCH
Course: MARS 691 305

Credit Hours: 12

Instruction Mode: NT

Student Credit Hours: 21

Enrollment: 3
Start Term: 2022/02

Course Title: INTRO TO GIS **Course:** MARS 325 401

Credit Hours: 3 Lab Hours: 2 Instruction Mode: TR **Lecture Hours: 2** Student Credit Hours: 24

Enrollment: 8 **Start Term:** 2022/02 Course Title: RESEARCH Course: MARS 491 402

Credit Hours: 4 Instruction Mode: NT **Student Credit Hours: 2**

Enrollment: 1 **Start Term:** 2022/02

Course Title: GIS MODELING COASTAL RES

Course: MARS 625 601 Credit Hours: 3 Lab Hours: 2 Instruction Mode: TR Lecture Hours: 2

Student Credit Hours: 33 **Enrollment: 11**

Start Term: 2022/02

Course Title: ADV GIS FOR COASTAL SYSTEMS

Course: MARS 626 600 Credit Hours: 3 Lab Hours: 2 Instruction Mode: TR **Lecture Hours: 2**

Student Credit Hours: 30

Enrollment: 10

If co-taught, % contributed to course: 5%

Descriptive (if applicable): Course led by Tatiana Williford (Lecturer)

Start Term: 2022/02

Course Title: DIRECTED STUDIES

Course: MARS 685 600 Credit Hours: 4 Instruction Mode: NT Student Credit Hours: 5

Enrollment: 2 **Start Term:** 2022/02 Course Title: RESEARCH Course: MARS 691 608 Credit Hours: 12 Instruction Mode: NT **Student Credit Hours: 18**

Enrollment: 3 **Start Term:** 2022/02

Course Title: PROFESSIONAL STUDY FOR MARM

Course: MARS 693 601 Credit Hours: 3 Instruction Mode: TR Lecture Hours: 3 **Student Credit Hours: 2**

Enrollment: 1 Start Term: 2022/02

Course Title: PROFESSIONAL STUDY FOR MARM

Course: MARS 693 601 Credit Hours: 3 Instruction Mode: TR Lecture Hours: 3 **Student Credit Hours: 2**

Enrollment: 1

Start Term: 2022/01

Course Title: GIS MODELLING Course: GEOG 665 601

Credit Hours: 3 Instruction Mode: TR Enrollment: 12

Start Term: 2022/01

Course Title: MARINE GEOGRAPHY

Course: MARS 210 401 Credit Hours: 3 Instruction Mode: TR Enrollment: 26

Start Term: 2022/01 Course Title: RESEARCH Course: MARS 491 411 Credit Hours: 4 Instruction Mode: NT

Enrollment: 1
Start Term: 2022/01

Course Title: DIRECTED STUDIES

Course: MARS 685 604 Credit Hours: 4 Instruction Mode: NT

Enrollment: 1
Start Term: 2022/01
Course Title: RESEARCH
Course: MARS 691 609
Credit Hours: 12
Instruction Mode: NT
Enrollment: 2

Start Term: 2022/01

Course Title: PROFESSIONAL STUDY FOR MARM

Course: MARS 693 604 Credit Hours: 3 Instruction Mode: TR Enrollment: 1 Start Term: 2021/03

Start Term: 2021/03 Course Title: RESEARCH Course: MARS 491 304 Credit Hours: 4 Instruction Mode: NT Enrollment: 1

Start Term: 2021/03 Course Title: RESEARCH Course: MARS 691 305 Credit Hours: 12 Instruction Mode: NT Enrollment: 3

Start Term: 2021/02

Course Title: INTRO TO GIS Course: MARS 325 401 Credit Hours: 3

Instruction Mode: TR Enrollment: 12 Start Term: 2021/02

Course Title: GIS MODELING COASTAL RES

Course: MARS 625 601 Credit Hours: 3 Instruction Mode: TR Enrollment: 14 Start Term: 2021/02 Course Title: RESEARCH Course: MARS 691 605 Credit Hours: 12 Instruction Mode: NT

Enrollment: 2

Start Term: 2021/01

Course Title: GIS MODELLING Course: GEOG 665 601

Credit Hours: 3 Instruction Mode: TR Enrollment: 6

Start Term: 2021/01 Course Title: RESEARCH Course: MARS 691 609 Credit Hours: 12 Instruction Mode: NT

Enrollment: 2

Start Term: 2020/03

Course Title: DIRECTED STUDIES

Course: MARS 685 303 Credit Hours: 4 Instruction Mode: NT

Enrollment: 1
Start Term: 2020/03
Course Title: RESEARCH

Course: MARS 691 309 Credit Hours: 12 Instruction Mode: NT Enrollment: 3

Start Term: 2020/02

Course Title: INTRO TO GIS **Course:** MARS 325 402

Credit Hours: 3

Instruction Mode: REM Enrollment: 28

Start Term: 2020/02 Course Title: RESEARCH Course: MARS 491 416 Credit Hours: 4 Instruction Mode: NT

Enrollment: 3
Start Term: 2020/01

Course Title: GIS MODELLING

Course: GEOG 665 601 Credit Hours: 3 Instruction Mode: TR Enrollment: 10

Start Term: 2020/01 Course Title: RESEARCH Course: MARS 491 408 Credit Hours: 4

Instruction Mode: NT Enrollment: 2

Start Term: 2020/01

Course Title: DIRECTED STUDIES

Course: MARS 685 602 Credit Hours: 4 Instruction Mode: NT

Enrollment: 1

Start Term: 2020/01 Course Title: RESEARCH Course: MARS 691 601 Credit Hours: 12 Instruction Mode: NT Enrollment: 1

Start Term: 2019/03 Course Title: RESEARCH Course: MARS 691 301 Credit Hours: 12 Instruction Mode: NT Enrollment: 1

Start Term: 2019/02

Course Title: INTRO TO GIS Course: MARS 325 402 Credit Hours: 3

Instruction Mode: TR Enrollment: 19

Start Term: 2019/02 Course Title: RESEARCH Course: MARS 491 403 Credit Hours: 4

Instruction Mode: NT Enrollment: 1

Start Term: 2019/02

Course Title: GIS MODELING COASTAL RES

Course: MARS 625 601 Credit Hours: 3 Instruction Mode: TR

Enrollment: 7

Start Term: 2019/01

Course Title: GIS MODELLING

Course: GEOG 665 601 Credit Hours: 3 Instruction Mode: TR Enrollment: 10 Start Term: 2019/01

Course Title: RESEARCH Course: MARS 491 408 Credit Hours: 4 Instruction Mode: NT Enrollment: 1

Start Term: 2018/02 Course Title: RESEARCH Course: MARS 491 405 Credit Hours: 4

Instruction Mode: NT Enrollment: 1 Start Term: 2018/02

Course Title: GIS MODELING COASTAL RES

Course: MARS 625 601 Credit Hours: 3 Instruction Mode: TR Enrollment: 10

Start Term: 2018/01

Course Title: GIS MODELLING Course: GEOG 665 601

Credit Hours: 3 Instruction Mode: TR

Enrollment: 7

Start Term: 2018/01

Course Title: INTRO TO GIS Course: MARS 325 401

Credit Hours: 3 Instruction Mode: TR Enrollment: 19

Start Term: 2018/01 Course Title: RESEARCH Course: MARS 491 403

Credit Hours: 4 Instruction Mode: NT Enrollment: 2

Start Term: 2018/01

Course Title: PROFESSIONAL STUDY FOR MARM

Course: MARS 693 602 Credit Hours: 3 Instruction Mode: TR Enrollment: 1

Start Term: 2017/03 Course Title: RESEARCH Course: MARS 691 253 Credit Hours: 12 Instruction Mode: NT Enrollment: 1

Start Term: 2017/02 Course Title: RESEARCH Course: MARS 491 405 Credit Hours: 4 Instruction Mode: NT

Enrollment: 4

Start Term: 2017/02

Course Title: GIS MODELING COASTAL RES

Course: MARS 625 601 Credit Hours: 3 Instruction Mode: TR Enrollment: 9 Start Term: 2017/02

Course Title: RESEARCH Course: MARS 691 603 Credit Hours: 12 Instruction Mode: NT Enrollment: 2

Start Term: 2017/01
Course Title: GIS MODELLING

Course: GEOG 665 601 Credit Hours: 3 Instruction Mode: TR Enrollment: 9

Start Term: 2017/01

Course Title: INTRO TO GIS Course: MARS 325 401 Credit Hours: 3

Instruction Mode: TR Enrollment: 17 Start Term: 2017/01

Course Title: SEMINAR IN MAR SCIENCE

Course: MARS 481 401 Credit Hours: 1 Instruction Mode: TR Enrollment: 12 Start Term: 2017/01 Course Title: RESEARCH Course: MARS 491 402 Credit Hours: 4

Instruction Mode: NT Enrollment: 4

Start Term: 2017/01 Course Title: RESEARCH Course: MARS 691 603

Credit Hours: 12 Instruction Mode: TR Enrollment: 2

Start Term: 2016/03

Course Title: DIRECTED STUDIES

Course: MARS 685 251 Credit Hours: 4 Instruction Mode: NT Enrollment: 1

Start Term: 2016/03 Course Title: RESEARCH Course: MARS 691 253 Credit Hours: 12 Instruction Mode: NT

Enrollment: 1
Start Term: 2016/02

Course Title: MARINE GEOGRAPHY

Course: MARS 210 401 Credit Hours: 3 Instruction Mode: TR Enrollment: 30

Start Term: 2016/02 Course Title: RESEARCH Course: MARS 491 411 Credit Hours: 4

Instruction Mode: NT Enrollment: 1 Start Term: 2016/02 Course Title: RESEARCH Course: MARS 691 603

Credit Hours: 12 Instruction Mode: NT Enrollment: 1

Start Term: 2016/01

Course Title: MARINE GEOGRAPHY

Course: MARS 210 401 Credit Hours: 3 Instruction Mode: TR Enrollment: 56 Start Term: 2016/01

Course Title: INTRO TO GIS Course: MARS 325 401

Credit Hours: 3
Instruction Mode: TR
Enrollment: 17

Start Term: 2016/01 Course Title: RESEARCH Course: MARS 491 406 Credit Hours: 4

Instruction Mode: NT

Enrollment: 1

Start Term: 2016/01 Course Title: RESEARCH Course: MARS 691 603 Credit Hours: 12 Instruction Mode: TR Enrollment: 1

Start Term: 2015/02

Course Title: MARINE GEOGRAPHY

Course: MARS 210 401 Credit Hours: 3 Instruction Mode: TR Enrollment: 25 Start Term: 2015/01

Course Title: INTRO TO GIS Course: MARS 325 401 Credit Hours: 3 Instruction Mode: TR

Enrollment: 18

Additional Teaching Activities

Start Term: 2023/01 Title: GIS for Resilience Audience: High school students

Location Instruction Delivered: University of Houston-Clear Lake

Sponsoring Organization: Houston Area GIS Day Sponsoring Organization Location: Houston, Texas

Number of Participants: 300

Description: Invited Speaker, Houston Area GIS Day Keynote Address

Start Date: 2023-11-16 **End Date:** 2023-11-16 **Start Term:** 2020/02

Title: Summer Undergraduate Mentor for External NSF REU

Audience: Undergraduate REU students **Location Instruction Delivered:** Tacoma, WA

 $\textbf{Sponsoring Organization:} \ \mathsf{NSF} \ \mathsf{via} \ \mathsf{University} \ \mathsf{of} \ \mathsf{Washington} \ \mathsf{Tacoma}$

Sponsoring Organization Location: Tacoma, WA

Description: Guided students in data analysis and visualization related to application of clustering algorithm to US Census data for identifying communities of interest to inform redistricting analysis (2020). Led team of five students in data analysis and visualization related to an inductive approach to identifying gerrymandered districts, both in person and remotely (2021). National Science Foundation REU: "Spatial Models and Electoral Districting" (Award Number: 1851696). PI Jim Thatcher (University of Washington), Co-PI Courtney Thatcher (University of Puget Sound).

Start Date: 2020-06-01 **End Date:** 2021-08-31 **Start Term:** 2020/01

Title: Developing and User-Testing Augmented Reality Tools for Storm Surge Risk

Audience: Center for Texas Beaches and Shores Students & Affiliates

Location Instruction Delivered: Online

Sponsoring Organization: Center for Texas Beaches and Shores

Sponsoring Organization Location: Galveston, TX

Description: Invited Speaker, Center for Texas Beaches and Shores Virtual Coffee Hour

Start Date: 2020-10-22 **End Date:** 2020-10-22 **Start Term:** 2018/02

Title: Developing and User Testing Tools for Communicating Storm Surge Risk

Audience: Institute for Sustainable Communities affiliates **Location Instruction Delivered:** College Station, TX

Sponsoring Organization: Institute for Sustainable Communities **Sponsoring Organization Location:** College Station, TX

Description: Invited Lecturer, Institute for Sustainable Communities Speaker Series Luncheon

Start Date: 2019-04-23

End Date: 2019-04-23 Start Term: 2017/02

Title: Communicating Coastal Hazards with Maps and Apps

Audience: Graduate students

Location Instruction Delivered: Galveston, TX

Sponsoring Organization: Texas A&M University at Galveston

Sponsoring Organization Location: Galveston, TX

Description: Guest Lecturer, Spring 2018 MARB/MARS 681 Graduate Seminar

Start Date: 2018-04-26 End Date: 2018-04-26 Start Term: 2017/01

Title: GIS-Based Spatial Analysis and Modeling (GEOG 665)

Audience: graduate students

Location Instruction Delivered: Galveston, Texas

Sponsoring Organization: Texas A&M University at Galveston

Sponsoring Organization Location: Galveston, Texas

Description: Adapt syllabus from Geography Department course for Galveston campus.

Start Date: 2017-08-01 End Date: 2017-12-15 Start Term: 2016/01

Title: Cartography in Climate Change Communication: How design, audience, and scale affect public understanding and

engagement

Audience: Texas A&M University Geography Department **Location Instruction Delivered:** College Station, TX

Sponsoring Organization: Department of Geography, Texas A&M University

Sponsoring Organization Location: College Station, TX

Description: Invited Lecturer, Department of Geography Friday Seminar Series, Texas A&M University

Start Term: 2015/02

Title: Basics of cartography and map design

Audience: UT Health Science Center Houston students

Location Instruction Delivered: Houston, TX Sponsoring Organization: UT Health Science Center Sponsoring Organization Location: Houston, TX Description: Guest Lecturer, Introduction to GIS

Start Date: 2016-02-02 **End Date:** 2016-02-02

Service

Start Term: 2023/03

Committee Name/Activity: Search Committee for APT Geographer Position

Organization: Marine & Coastal Environmental Science, TAMUG

Service Type: Department Service Role: Committee Chair

Regionality: Local Start Term: 2023/01

Committee Name/Activity: Program Coordinator, Coastal Environmental Science and Society

Organization: Marine & Coastal Environmental Science, TAMUG

Service Type: Department

Service Role: Professional Leadership Role

Regionality: Local Start Term: 2022/02

Committee Name/Activity: Lead for Trimble Technology Sattelite Lab Application

Organization: Texas A&M University at Galveston

Service Type: College

Service Role: Professional Leadership Role

Regionality: Local

Brief Description/Impact (if applicable): Prepare written application, meet with Trimble representatives (virtually and at

conferences)

Start Term: 2022/01

Committee Name/Activity: Member, Design and Analytics Lab for Urban Artificial Intelligence

Organization: Texas A&M Institute of Data Science

Service Type: University Service Role: Lab Member Regionality: Local

Start Term: 2021/02

Committee Name/Activity: Member

Organization: Texas OneGulf Network of Experts (TONE)

Service Type: Professional Service Role: Board Member Regionality: Regional

Committee Name/Activity: TAMUG Honor Council Organization: Texas A&M University at Galveston

Service Type: College

Start Term: 2021/01

Service Role: Committee Member

Regionality: Local Start Term: 2021/01

Committee Name/Activity: Project Lead, VIVID Lab for Visceral Inter-sensory Visualization & Information Design

Organization: Texas A&M Institute of Data Science

Service Type: University
Service Role: Project Lead

Regionality: Local

Brief Description/Impact (if applicable): Project: Tailored Risk Communication in Virtual and Augmented Reality

Start Term: 2020/02

Committee Name/Activity: Diversity and Inclusion Committee Chair, Cartography Specialty Group

Organization: American Association of Geographers

Service Type: Professional Leadership **Service Role:** Professional Leadership Role

Regionality: National Start Term: 2019/03

Committee Name/Activity: Associate Member, Marine Biology Graduate Program (formerly IDP)

Organization: Department of Marine Biology, Texas A&M University at Galveston

Service Type: Department

Service Role: Graduate Faculty Membership

Regionality: Local Start Term: 2018/03

Committee Name/Activity: Faculty Fellow

Organization: Institute for Disaster Resilient Texas (IDRT)

Service Type: University
Service Role: Faculty Fellow

Regionality: Local Start Term: 2018/02

Committee Name/Activity: Discovery Lead, Coastal Risk Reduction and Resilience Discovery Area

Organization: Institute for Sustainable Communities

Service Type: University **Service Role:** Discovery Lead

Regionality: Local Start Term: 2016/02

Committee Name/Activity: Member, Art Subcommittee of the Council for Built Environment

Organization: Texas A&M University at Galveston

Service Type: College

Service Role: Committee Member

Regionality: Local Start Term: 2016/01

Committee Name/Activity: Graduate Faculty, Master of Marine Resources Management & Doctor of Philosophy in Marine and

Coastal Management and Science

Organization: Marine & Coastal Environmental Science Department, Texas A&M University at Galveston

Service Type: Department

Service Role: Graduate Faculty Membership

Regionality: Local

Start Term: 2015/01

Committee Name/Activity: Member, Marine Resources Management Core Committee

Organization: Marine & Coastal Environmental Science Department

Service Type: Department Service Role: Committee Member

Regionality: Local Start Term: 2022/02 End Term: 2022/02

Committee Name/Activity: Session Chair & Organizer Organization: American Association of Geographers

Service Type: Professional Service Role: Session Chair Regionality: National

Brief Description/Impact (if applicable): Chair and Organizer for two sessions, paper and panel: "Speculative Cartography at

the Interplay of Art and Science"

Start Term: 2022/02 **End Term:** 2022/02

Committee Name/Activity: Session Organizer Organization: American Association of Geographers

Service Type: Professional Service Role: Organizer Regionality: National

Brief Description/Impact (if applicable): Organizer for "Redistricting: what just happened? what happens next?" paper session

Start Term: 2022/01 **End Term:** 2022/01

Committee Name/Activity: Peer Reviewer

Organization: 5th ACM SIGSPATIAL International Workshop on Advances in Resilient and Intelligent Cities

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2022/01

End Term: 2022/01

Committee Name/Activity: Program committee member

Organization: 5th ACM SIGSP6ATIAL International Workshop on Advances in Resilient and Intelligent Cities (ARIC 2022)

Service Type: Professional
Service Role: Committee Member
Regionality: International

Brief Description/Impact (if applicable): Seattle, WA, United States, November 1st, 2022, hxxps://urbands.github.io/ARIC2022/

Start Term: 2021/02 **End Term:** 2021/02

Committee Name/Activity: Session Organizer Organization: American Association of Geographers

Service Type: Professional Service Role: Organizer Regionality: National

Brief Description/Impact (if applicable): Organizer for "Mapping Climate Change in 2022" paper session

Start Term: 2020/02 **End Term:** 2021/02

Committee Name/Activity: Past Chair, Cartography Specialty Group

Organization: American Association of Geographers

Service Type: Professional Leadership
Service Role: Professional Leadership Role

Regionality: National Start Term: 2018/02 End Term: 2021/01

Committee Name/Activity: Member, MCES/MARS Scholarship and Awards Committee

Organization: Marine & Coastal Environmental Science Department

Service Type: Department Service Role: Committee Member

Regionality: Local Start Term: 2020/03 End Term: 2020/03

Committee Name/Activity: Peer Reviewer Organization: New York Sea Grant Service Type: Review Panel Service Role: Reviewer Regionality: National

Start Term: 2020/02 **End Term:** 2020/02

Committee Name/Activity: Session Organizer Organization: American Association of Geographers

Service Type: Professional Service Role: Organizer Regionality: National

Brief Description/Impact (if applicable): Organizer for "Mapping Climate Change" paper session

Start Term: 2020/02 **End Term:** 2020/02

Committee Name/Activity: Panel Session Organizer Organization: American Association of Geographers

Service Type: Professional Service Role: Organizer Regionality: National

Brief Description/Impact (if applicable): Organizer for "Election Mapping" panel session

Start Term: 2020/01 **End Term:** 2020/02

Committee Name/Activity: Member, MCES Geological Marine Science Visiting Instructional Faculty Search Committee

Organization: Marine & Coastal Environmental Science Department

Service Type: Department
Service Role: Committee Member

Regionality: Local Start Term: 2019/02 End Term: 2020/02

Committee Name/Activity: Chair, Cartography Specialty Group

Organization: American Association of Geographers

Service Type: Professional Leadership **Service Role:** Professional Leadership Role

Regionality: National Start Term: 2020/01 End Term: 2020/01

Committee Name/Activity: Presenter, TAMUG GIS Day Organization: Texas A&M University at Galveston

Service Type: College Service Role: Presenter Regionality: Local

Brief Description/Impact (if applicable): Workshop | Google Earth Engine

Start Term: 2019/03 **End Term:** 2019/03

Committee Name/Activity: Peer Reviewer

Organization: GeoJournal Service Type: Review Panel Service Role: Reviewer Regionality: International

Start Term: 2019/03 **End Term:** 2019/03

End Term: 2019/03

Committee Name/Activity: Peer Reviewer Organization: Weather, Climate, and Society

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2019/03

Committee Name/Activity: Peer Reviewer

Organization: Frontiers in Computer Science

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2019/02 End Term: 2019/02

Committee Name/Activity: Peer Reviewer

Organization: Journal of Environmental Studies and Sciences

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2019/02 End Term: 2019/02

Committee Name/Activity: Peer Reviewer

Organization: Cartography and Geographic Information Science

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2019/02 End Term: 2019/02

Committee Name/Activity: Peer Reviewer
Organization: Environmental Research Letters

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2019/02

End Term: 2019/02

Committee Name/Activity: Peer Reviewer

Organization: ISPRS International Journal of Geo-Information

Service Type: Review Panel Service Role: Reviewer Regionality: International

Start Term: 2019/02 **End Term:** 2019/02

Committee Name/Activity: Chair and Organizer for virtual paper session **Organization:** American Association of Geographers Annual Meeting

Service Type: Professional Service Role: Session Chair Regionality: National

Brief Description/Impact (if applicable): Organizer and Chair for "Producing the Hazardscape: Mapping the Dynamic and

Dangerous" paper session **Start Term:** 2018/02

End Term: 2019/02

Committee Name/Activity: Vice Chair, Cartography Specialty Group

Organization: American Association of Geographers

Service Type: Professional Leadership **Service Role:** Professional Leadership Role

Regionality: National Start Term: 2019/01 End Term: 2019/01

Committee Name/Activity: Peer Reviewer

Organization: Standard Grant for NSF Science, Technology, and Society (STS) Program

Service Type: Review Panel Service Role: Reviewer Regionality: National Start Term: 2018/03

Start Term: 2018/03 End Term: 2018/03

Committee Name/Activity: Peer Reviewer

Organization: Climatic Change Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2015/01 End Term: 2018/03

Committee Name/Activity: Faculty Fellow

Organization: Center for Texas Beaches and Shores

Service Type: University
Service Role: Faculty Fellow

Regionality: Local Start Term: 2018/02 End Term: 2018/02

Committee Name/Activity: Peer Reviewer

Organization: Environmental Modeling and Software

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2018/02 End Term: 2018/02

Committee Name/Activity: Session Organizer

Organization: American Association of Geographers Annual Meeting

Service Type: Professional Service Role: Organizer Regionality: National

Brief Description/Impact (if applicable): Organizer for "Immersive II: Immersive Technologies for Natural Hazards and Climate

Change Communication" paper session

Start Term: 2017/02 **End Term:** 2018/02

Committee Name/Activity: Judge, Undergraduate TAMUG Student Research Symposium

Organization: Texas A&M University at Galveston

Service Type: College Service Role: Reviewer Regionality: Local Start Term: 2016/01 End Term: 2018/02

Committee Name/Activity: Member, Remote Sensing Search Committee Organization: Marine & Coastal Environmental Science Department

Service Type: Department Service Role: Committee Member

Regionality: Local Start Term: 2018/01 End Term: 2018/01

Committee Name/Activity: Peer Reviewer Organization: Climate Risk Management

Service Type: Review Panel Service Role: Reviewer Start Term: 2018/01 End Term: 2018/01

Committee Name/Activity: Presenter, TAMU GIS Day Organization: Geography Department (Texas A&M)

Service Type: Department Service Role: Presenter Regionality: Local

Start Term: 2017/02 End Term: 2018/01

Committee Name/Activity: Lead, Recertification of MARS 210 for Core Curriculum and International and Cultural Diversity

(ICD) credit

Organization: Marine & Coastal Environmental Science Department

Service Type: Department

Service Role: Course Recertification

Regionality: Local Start Term: 2017/01 End Term: 2018/01

Committee Name/Activity: Member, GIS Day Planning Committee

Organization: Geography Department (Texas A&M)

Service Type: Department Service Role: Committee Member

Regionality: Local Start Term: 2017/02 End Term: 2017/02

Committee Name/Activity: Session Chair

Organization: American Association of Geographers

Service Type: Professional Service Role: Session Chair Regionality: National

Brief Description/Impact (if applicable): Chair for "Mapping Climate Change II: Visualizing the Geographies of a Changing

Climate" paper session **Start Term:** 2017/01 **End Term:** 2017/02

Committee Name/Activity: Peer Reviewer

Organization: Cartography and Geographic Information Science

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2016/02

Committee Name/Activity: Co-Lead, ad-hoc committee for review of OCRE curriculum

Organization: Marine & Coastal Environmental Science Department

Service Type: Department
Service Role: Committee Co-Chair

Regionality: Local Start Term: 2016/01 End Term: 2017/02

End Term: 2017/02

Committee Name/Activity: Member, GIS Librarian Search Committee Organization: Marine & Coastal Environmental Science Department

Service Type: Department Service Role: Committee Member

Regionality: Local Start Term: 2017/01 End Term: 2017/01

Committee Name/Activity: Peer Reviewer Organization: Progress in Physical Geography

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2016/03 End Term: 2017/01

Committee Name/Activity: Peer Reviewer Organization: Environment and Behavior

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2015/01

End Term: 2017/01 Committee Name/Activity: Exhibitor, TAMU GIS Day Organization: Geography Department (Texas A&M)

Service Type: Department Service Role: Presenter Regionality: Local Start Term: 2016/02 End Term: 2016/02

Committee Name/Activity: Peer Reviewer Organization: Nova Science Publishers

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2015/01 End Term: 2016/02

Committee Name/Activity: Member, Academic Program Review Committee for Ocean and Coastal Resources

Organization: Marine & Coastal Environmental Science Department

Service Type: Department Service Role: Committee Member

Regionality: Local Start Term: 2015/02 End Term: 2015/02

Committee Name/Activity: Peer Reviewer Organization: Weather, Climate, and Society

Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2015/02 End Term: 2015/02

Committee Name/Activity: Peer Reviewer

Organization: Climatic Change Service Type: Review Panel Service Role: Reviewer Regionality: International Start Term: 2015/02

Committee Name/Activity: Session Organizer Organization: American Association of Geographers

Service Type: Professional Service Role: Organizer Regionality: National

End Term: 2015/02

Brief Description/Impact (if applicable): Organizer for "Interdisciplinarity in Graduate Training in New Institutional Landscapes"

paper session

Professional Affiliations and Memberships

Start Term: 2014/01

Organization Name: North American Cartographic Information Society (NACIS)

Membership Status: Member

Start Term: 2010/02

Organization Name: American Association of Geographers (AAG)

Membership Status: Member