

Chris Houser
Dean, Faculty of Science, University of Windsor
Professor, School of the Environment
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EDUCATION

- Ph.D. Scarborough College Coastal Research Group
Department of Geography, University of Toronto at Scarborough
September 1999 – June 2004
Thesis: Feedback mechanisms in the morphodynamics of multiple-barred nearshores
Griffith Taylor Award
- M.Sc. Department of Geography, University of Guelph
September 1997 – May 1999
Thesis: Atmospheric emission of PM₁₀ from clay-crustured surfaces by saltation abrasion
Governor General's Academic Gold Medal
- B.Sc. Faculty of Environmental Science, University of Guelph
September 1993 – May 1997
Area of Emphasis: Hydrology and Geomorphology
- Administrative Courses
Centre for Higher Education Research and Development (CHERD)
Senior University Administrators Course (SUAC)
Winnipeg, June 2019
- Council for Advancement and Support of Education
Advanced Development for Deans and Academic Leaders
Phoenix, January 2020

ADMINISTRATIVE POSITIONS

- Dean of Science, July 2016- present
Faculty of Science, University of Windsor
Responsibilities
- Provide strategic leadership, management, and direction for the Faculty of Science
 - Foster a positive workplace climate and environment that encourages excellence in learning, teaching, and research
 - Act as an advocate for the Faculty, both within the University and externally, securing the resources to advance the education and research mission
 - Encourage development and improvement of academic programs
 - Grow undergraduate and graduate student enrolment through the recruitment and the retention of high-caliber students
 - Sustain a high-quality academic environment for students through the promotion

and recognition of teaching excellence, and through appropriate mentoring for students

- Engage the Faculty of Science community in a constructive dialogue to build a consensus around strategic initiatives that will bring the Faculty to an even higher level of achievement
- Develop and implement a plan that will enhance the profile of the Faculty
- Exploit the potential for internal and external partnerships, to improve research capacity and enhance undergraduate and graduate opportunities
- Establish effective strategies for faculty development, retention and renewal
- Engage actively in fundraising on behalf of the Faculty

Promote and implement the employment and educational equity goals of the University

Accomplishments

- ***Undergraduate and Graduate Recruitment:*** Implemented programs to increase undergraduate and graduate applications and registrations through a refocused and proactive (Destination Science) recruitment strategy focused on high impact learning experiences highlighted in school visits, parent's night, welcome booklet and Science by the Numbers advertisement. The growth at the undergraduate level was the result of an increase in undergraduate applications and first-choice registrations in a more competitive Provincial environment. Total Growth: 545 undergraduate students and 319 graduate students from fall 2015.
- ***High Impact Learning Experiences:*** In support of the student experience, we have introduced new undergraduate research programs that increase opportunities for undergraduate students while also providing mentoring and management training for senior graduate students. We have also increased participation in study abroad programs, created new internship and externship programs, and service-learning opportunities for academic credit. In support of the expanded number and diversity of high impact learning experiences, we hired an AAS faculty member who also coordinates our recruitment and retention programs.
- ***Student Support Programs:*** We have implemented several new student programs through our USci Network including PASS (Preparation for Academic Success in Science), LEAD Medallion Scholars, SMART (Science Meets Art), Living Learning Communities, Careers in Science, Women in Science (WinS), Parents Night, Sci of Relief Mental Health Strategy, and the Common Ground Indigenous Strategy.
- ***Budget:*** Reduced net position deficit of the Faculty of Science from ~\$4,000,000 (July 2016) to ~\$390,000 as of May 2019 through enrollment growth in undergraduate, traditional graduate and professional graduate programs. Prior to the provincial 10% tuition cut we were on track to having a positive net position and an ability to start addressing budget overspend and historical debt by fall 2019. The combination of continued enrolment growth and salary savings from retiring faculty will allow us to continue to address the 10% tuition cut and move back towards a balanced or positive net position in the next 3 years.
- ***Faculty Growth:*** Chaired and or supported the hiring of more than 28 faculty between 2016 and 2019 from both the SPF 50 program at the University of Windsor (11 hires) and retirement replacements (14 hires). Total permanent faculty

compliment has increased from 109 in 2016 to 127 in 2019. The growth in faculty has balanced our undergraduate enrollment growth to allow us to maintain a 1:16 faculty to undergraduate student ratio as a competitive advantage in Ontario.

- **Faculty Development:** We have implemented a Faculty Onboarding program to ensure that our junior professors are aware of University and Faculty policies, as well as understand the opportunities to develop high impact learning experiences that also support research. We have also introduced incentives and provided necessary resources for faculty to participate in high impact learning experiences for students. A Faculty seminar series (PEARL) provides faculty with training in developing online and flipped courses, authentic engagement and outreach opportunities, and high impact experiences for students that can be used as “broader impacts” for federal grants.
- **Advancement:** Created outreach and engagement programs (e.g. Science OnTap) for Faculty and Students to highlight the research they are conducting to the local community. Hired Communications Coordinator as part of an Advancement Team with the Major Gift Officer, AAS in High Impact Learning Experiences, and future Industry Liaison. This change in strategy and reorganization of the Dean’s Office has resulted in >\$1,700,000 in philanthropic gifts and endowments to the Faculty of Science in 2018/2019, including the largest philanthropic gift in support of research to the University of \$1,000,000 for the Canadian Centre for Alternatives to Animal Methods (CCAAM).
- **Research:** Created a research portfolio under the Associate Dean for Graduate Studies to ensure that my office supported research. One of the new programs developed by the now Associate Dean for Graduate Studies and Research is a mock review panel system that has increased the success rate of our faculty applying to NSERC, SSHRC and CIHR. Specifically, implementation of this program resulted in a >20% increase in tri-council funding that does not include more than \$21,000,000 in large grants. Implemented a graduate enrollment incentive fund to help both new and mid-career faculty build their research teams and increase success in receiving tri-council funding. Through this program, we provided faculty with >\$125,000 in research support in the 2018/19 academic year. Additional support to the faculty was provided through Research at Risk funding that links annual undergraduate enrollment growth to funding for equipment and infrastructure in need of repair or replacement. In the 2018/19 academic year, we provided >\$450,000 to faculty through this program. Annual research funding for 2018/19 was \$17,500,000.
- **Industry Partnerships:** Developing partnerships with industry in Windsor-Essex through the Extension Science program and in collaboration with the Windsor-Essex Economic Development Corporation (WEEDC). Implemented and steering Extension Science program to support local industry including nutraceuticals, pharmaceuticals, wineries, breweries, distilleries and greenhouses. Supporting the creation of an industry liaison position for the Faculty of Science to commence Spring 2020 in collaboration with WEEDC and the VPRI. Introduced revisions to ByLaw 20 to create new Professor of Practice definition in addition to Clinical Professors and Indigenous Scholars.
- **Infrastructure:** Helped steer successful Strategic Innovation Fund (SIF) project

- for the new Centre for Research (CORe) that officially opened in summer 2019.
- **Program Development:** Steered and supported development of new program development including Certificates, Master of Engineering Materials Chemistry, and Translational Health. Currently working on supporting the development of micro-credentials in lab and field-based programs, as well as block transfer streams to promote growth in programs (Environment, Economics and Forensics) with capacity for growth.
 - **Workplace Climate:** Supported and implemented recommendations of a Workplace Climate report to We have also increased opportunities for women and (self-identified) LGBT and racialized faculty to develop leadership experience as part of a broader succession planning exercise. understand and tackle legacy workplace climate issues in the Faculty of Science. The Science Executive has focused on clearly stating Faculty policies to ensure transparency and fairness including CRC returned overhead, communications, cost-sharing and research bridge support. This and other changes in the Faculty of Science were made possible through the adoption of an open-door and accessible leadership model to build moral and pride in the Faculty of Science by Faculty, Staff and Students- the changes we have made in enrolment, budget, advancement, and faculty recruitment would not have been possible if I had not adopted this unique and non-traditional leadership approach.

Direct and Indirect Reports

Associate Dean for Graduate Affairs and Research
 Associate Dean for Undergraduate Affairs
 Assistant to the Dean (Budget Coordinator)
 Assistant Dean for Student and Faculty Engagement
 Recruitment and Retention Officer
 Communications Coordinator
 Advancement Officer (Major Gift Officer)
 Academic Advisor
 Head, Biomedical Sciences Department
 Head, Chemistry & Biochemistry Department
 Director, School of Computer Science
 Director, School of the Environment
 Head, Economics Department
 Director, Forensic Sciences
 Executive Director, The Great Lakes Institute for Environmental Research
 Head, Integrative Biology Department
 Head, Mathematics & Statistics Department
 Head, Physics Department.
 127 permanent faculty lines (filled and open budget lines)

Associate Dean for Undergraduate Affairs and Faculty Development, Sept. 2014-June 2016
 College of Geosciences, Texas A&M University

Responsibilities

- Coordinate undergraduate curricula and programs: scheduling and monitoring

courses and degree programs, registration blocks, readmission, Q and no grade drops, New Student Conferences, UCC Chair

- Lead college-wide curriculum innovation: QEP activities, on-line learning, and new degrees, minors and certificates.
- Coordinate degree programs, certificates and undergraduate minors and supervise academic advising in college
- Oversee processes and activities related to recruitment, admission, and retention of a diverse group of FTIC and transfer students with Director of Recruitment
- Coordinate assessments of student learning. Acts as Assessment Liaison to the University Assessment Committee and co-chairs College Assessment Committee
- Coordinate High Impact Experiences for undergraduate students including study abroad, REEPs, field trips and experiences, internships, etc.
- Coordinate nomination processes associated with faculty, staff and student awards. Co-chair scholarship committee
- Initiate and coordinate faculty development activities. Oversee faculty course loads, and College Grievance Committee
- Counsel students on academic progress and career goals of students, handle student complaints and inform students of University rules and policies

Accomplishments

- *Recruitment*: Refocused recruitment on transfer students from 2-year community colleges through the development of strategic relationships with colleges in Houston, Dallas-Fort Worth and San Antonio, and repaired relationships with Prospective Student Centers and Transfer Admissions Office. Recruitment programs for freshman, transfer and change of major students were built around a *Pathway to the Geosciences* mapping program that provided students with clear pathways to an undergraduate degree in the geosciences. Result has been a 10% increase in undergraduate majors in 1 year and a 104% increase in transfer admissions.
- *Diversity*: Ensured that recruitment programs not only maintained diversity of students at 26% under-represented minorities, but also increased diversity of incoming students to 34% under-represented minorities. The national average for geoscience programs in the United States is <7%.
- *Retention*: Introduced new retention programs based on a detailed assessment of student success and historical retention problems in the college including a free tutoring program for students (GeT; Geosciences Tutors) and a freshman bridge program (GAP; Geosciences Academic Preparation Program). Intentional participation in retention programs and high impact learning experiences was also incentive through a Medallion Scholars Program.
- *Academic Advising*: Restructured academic advising to increase the effectiveness of academic advising in the college and to address problems associated with reporting lines, expectations, uneven distribution of responsibilities and scope of work.
- *High Impact Programs*: Introduced new undergraduate research programs that increase opportunities for undergraduate students while also providing mentoring and management training for senior graduate students through a hierarchical mentoring program that starts with Freshman Seminars. Increased participation in

study abroad programs with over 10% of undergraduates studying abroad each year in addition to institutionalizing internship and externship programs, and introducing the first service learning opportunities for students in the college.

- *Faculty Development*: Introduced faculty workshop and seminar series to provide faculty with training in developing online and flipped courses, authentic engagement and outreach opportunities, and high impact experiences for students that can be used as “*broader impacts*” for federal grants. Also, developed mentoring program for the Department of Geology & Geophysics, faculty onboarding program, and incentives for faculty to provide High Impact Experiences for undergraduate students.
- *Aggie Research Scholars*: Provided opportunities for senior PhD students to develop essential skills in mentoring and managing undergraduate students in research.
- *Faculty Development Policies*: Development of policies for Academic Professional Track (APT) faculty, engagement of research scientists from the International Ocean Discovery Program (IODP), and Development Leave.

Direct and Indirect Reports

Senior Academic Advisor II for College of Geosciences
6 Academic Advisors of Undergraduate and Graduate programs
Director of Recruitment and Retention
High Impact Programs Coordinator

Budget: \$250,000 base budget + \$410,000 salaries for direct and indirect reports

Global Faculty Ambassador, September 2012- June 2016

Texas A&M University

Responsibilities

- Faculty liaison between the Office of the Provost and the rest of main campus, to support the development of research and education programs at the Soltis Center for Research and Education in central Costa Rica

Accomplishments

- Facilitated the development and implementation of research and education programs at Texas A&M University (main campus), TAMU Corpus Christi and TAMU Commerce
- Responsible for an increase of over 2500 student nights (or ~\$137,500 per year) at the Soltis Center for Research and Education through academic programs and over \$1,500,000 in external research funding to faculty from Texas A&M University (main campus)
- Successfully identified and pursued development and endowment opportunities for the Soltis Center through the Office of the Provost and the Texas A&M Foundation
- Developed strategic plan to sustain and increase research, education and outreach programs at the Soltis Center

Undergraduate Director, September 2013-2014

Department of Geography, Texas A&M University

Responsibilities

- Responsible for management of the undergraduate program with a specific focus on maintaining course enrollment during core curriculum transition and increasing the number of majors entering as freshman students through outreach and the development of a high-school pipeline program (iGIS) to support a new GIST program.

Accomplishments

- Successfully steered proposal for a new GIST major through to approval by Faculty Senate and currently steering proposals for a revised GIST minor and University Studies Area of Concentration. Had enrollment of 99 students within first year.
- Lead the creation of special sections of GEOG 201 for the College of Engineering that are linked to their ABET accreditation self-evaluation process
- Created special sections of GEOG 202 to increase and sustain enrollment of students from Veterinary Medicine & Biomedical Sciences

Graduate Director, January September 2004-July 2007

Department of Environmental Science, University of West Florida

- Responsible for the management of a new graduate (MS) program (started August 2004) at the University of West Florida that grew to include 18 thesis track students and 27 non-thesis track students by July 2007

NSF REU Site Director: Ecohydrology of a Tropical Montane Forest, 2010-2013

Soltis Center for Research and Education, Costa Rica (<http://costaricareu.tamu.edu/>)

- Administrator of an interdisciplinary REU program at the Soltis Center for Research and Education in Central Costa Rica involving 10 students per year mentored by 12 faculty from 5 departments and 3 colleges

ACADEMIC POSITIONS

Professor, July 2016-present

School of the Environment

Faculty of Science, University of Windsor

Associate Professor, September 2011 – June 2016

Department of Geography, Texas A&M University

Department of Geology and Geophysics, Texas A&M University

Assistant Professor, September 2007 – August 2011

Department of Geography, Texas A&M University

Assistant Professor, September 2004 – August 2007

Department of Environmental Studies, University of West Florida

Adjunct Professor, 2003-2012

Department of Geography, University of Victoria

Associate Lecturer, June 2003- August 2004
Department of Environmental Science, Royal Roads University

Postdoctoral Fellow (October 2003 - September 2004)
Geological Survey of Canada- Pacific Geoscience Centre
NSERC Postdoctoral Fellowship in a Canadian Government Laboratory (\$40,800)

Doctoral Candidate/Graduate Research Associate (June 1999 – October 2003)
Scarborough College Coastal Research Group, University of Toronto at Scarborough
Natural Sciences and Engineering Research Council PGS (A) Award (\$34,600)
Natural Sciences and Engineering Research Council PGS (B) Award (\$38,200)
William G. Dean Graduate Scholarship (\$15,000)

TEACHING AND RESEARCH GRANTS

Research Grants (Total: >\$2,500,00 CDN awarded)

Natural Science and Engineering Research Council of Canada. \$195,000. Discovery Grant. Analytical Reasoning and Fuzzy Cognitive Maps of Barrier Island Response to Natural and Anthropogenic Forcing. C. Houser (PI), 2017- 2022.

Natural Science and Engineering Research Council of Canada. \$120,000. Accelerator Supplement. Analytical Reasoning and Fuzzy Cognitive Maps of Barrier Island Response to Natural and Anthropogenic Forcing. C. Houser (PI), 2017- 2020.

Department of Defense- Army Corps of Engineers. \$43,262 US. BAA 16-0012 for Perceptions, governance and stakeholder relationships along the Texas coast. C. Houser (PI), 2016.

National Science Foundation, \$15,444 US. Doctoral Dissertation Research: Assessing the Role of Geologic Framework on Barrier Island Geomorphology. C. Houser (PI), Wernette, P (PhD student), 2016.

Texas Sea Grant, \$19,990 US. Rip Current Survivor Story. C. Houser (PI), 2015.

Coastal Management Program, \$50,000 US. Geologic framework assessment of Follets Island. T. Dellapanna (PI), J. Fingus (Co-PI), C. Houser (Co-PI), 2014.

National Science Foundation, \$6,748 US. REU Supplement: Longitudinal study Role of Free and Forced Boundary Conditions on Beachface Evolution. C. Houser (PI), 2013.

National Science Foundation, \$60,636 US. Role of Free and Forced Boundary Conditions on Beachface Evolution. C. Houser (PI), 2013-2014, August 2013.

National Science Foundation, \$557,000 US. REU Site: Ecohydrology of a tropical montane cloud forest. C. Houser (PI) and A. Cahill, 2010-2013, January 2010.

Texas Sea Grant, \$137,900 US. Perception of the Rip Current Hazard on Galveston Island and South Padre Island. C. Houser (PI) and C. Brannstrom, 2012-2014.

National Science Foundation, \$71,437 US. Measurement of the Drag Coefficient for Seagrass at Tidal, Storm and Seasonal Scales. C. Houser (PI), 2012-2013.

National Science Foundation, \$11,970 US. REU Supplement: Longitudinal study of wave attenuation by seagrass. C. Houser (PI), 2012.

National Science Foundation, \$47,380 US. Synchronization of Beach-Dune Systems. C. Houser

(PI), 2009-2011.

PADI Foundation, \$4,995 US. Undergraduate research assistant: Impact of boat wakes and wind waves on backbarrier seagrass beds. C. Houser (PI)

Florida Department of Transportation, \$94,859 US, Study of the effects of shoreline structures on nesting loggerhead turtles. M. Lamont (PI), C. Houser (Co-PI), 2011-2012.

National Park Service, \$25,800 US. Impact of oversand vehicles at Assateague Island National Seashore. C. Houser (PI), 2009-2011.

National Park Service, \$177,000 US. Geological Framework of Santa Rosa Island. C. Houser (PI), 2007-2011.

National Park Service, \$39,000 US. Boat wake erosion along the Savannah River. C. Houser (PI), 2008-2011.

NOAA: Florida Sea Grant, \$113,150 US. Rip current hazard at Pensacola Beach. C. Houser (PI), K Meyer-Arendt, 2008-2010.

Department of Defense, \$37,500 US. Hurricane Impacts at Eglin Air Force Base. C. Houser (PI), 2008-2012.

NOAA: Texas Sea Grant, \$9,000 US Controls on sedimentation in salt marshes, D. Cairns (PI), C. Houser, 2009-2010.

NOAA, \$84,000 US. Mortality associated with tropical cyclones, K. Meyer-Arendt (PI), C. Houser, 2008-2010.

American Chemical Society, \$35,000 US. Sediment transport processes on the inner-shelf. C. Houser (PI), 2007-2008.

NASA, \$36,000 US. Estimation of spectral waves for Orion Lander. J. Kaihtu (PI), C. Houser, 2007-2008.

National Park Service, \$47,368 US. Mississippi Barrier Island Response to Hurricane Katrina. C. Houser (PI), 2005-2007.

National Park Service, \$8,717 US. Evolution of Overwash Deposits Following Katrina. C. Houser (PI), 2005-2006.

National Park Service, \$9,000 US. Evaluation of vegetation for dune building. C. Houser (PI), 2005-2006.

University of West Florida Research Award, \$6,250 US. Wave Attenuation by Seagrass. C. Houser (PI), 2004-2005.

University of West Florida Faculty Scholarly and Creative Activity Award, \$2,000 US. Beach-Dune Interaction at Pensacola Beach, Florida. C. Houser (PI), 2004-2005.

Teaching Grants (Total: >\$1,600,000 CDN awarded)

Ministry of Advanced Education and Skills Development, Province of Ontario. \$750,000. Extension Science. C. Houser (PI).

Dean of Faculties, Tier One Program, Texas A&M University, \$275,034 US. Aggies commit to undergraduate research and graduate leadership. C. Quick (PI), C. Houser, S. Datta and S. Bloomfield. July 2015.

Dean of Faculties, Tier One Program, Texas A&M University, \$269,400 US. A vision for the Soltis Center: An interdisciplinary study abroad research program through integrated project delivery. J Kim (PI), J. Kang, S. Shafer and C. Houser. July 2015.

College of Geosciences, Texas A&M University, \$63,000 US. Engaging Students Early Through Field-Based Experiences in Introductory Courses. C. Houser (PI), Brannstrom, Ewers,

Frauenfeld, Houser, Quiring, Roark, January 2012.
 College of Geosciences, Texas A&M University, \$61,000 US. Enhancing Research Intensive Capstone Courses with More Fieldwork. Collins (PI), Ewers, Frauenfeld, Houser, Quiring, Roark, January 2012.
 College of Geosciences, Texas A&M University. \$11,445 US. Weather stations for study abroad courses at the Soltis Center for Research and Education. C. Houser (PI), S. Quiring, September 2010.
 College of Geosciences, Texas A&M University, \$6,000 US. Personal GPS units for GEOL/GEOG 352 GPS in the Geosciences. C. Houser (PI), January 2010.
 Texas A&M University Freshman Study Abroad Program, \$22,500 US. GEOG 203 Planet Earth Freshman Experience in Costa Rica. C. Houser, S. Quiring, March 2009.
 Texas A&M University Freshman Seminar Series, \$2,000 US. The Science of Surfing. C. Houser, August-December 2009.
 Texas A&M University International Programs Grant, \$1,686 US. Geomorphology at the Soltis Center. C. Houser, March 2009.

Other Awards

Texas A&M University, Honors and Undergraduate Research. 2015 Betty M. Unterberger Award, May 2015.
 Texas A&M University, Department of Geography, \$800. Meritorious Research Performance Bonus. September 2010.
 College of Geosciences, Dean's Distinguished Achievement Award for Teaching, December 2013.

PUBLICATIONS (h index=29 from Google Scholar, February 2020)

Undergraduate student authors have double underline
Graduate Student authors have single underline

Articles in Preparation (in final draft and within 6 months of submission)

1. Trimble, S., Brander, R., and **Houser**, C. (in prep.). Surviving the panic: Rip current survivors share their experience.
2. Wernette, P., C. **Houser**, B. Weymer, M. Everett, B. Reece, and M.P. Bishop. (*in prep.*) Incorporating framework geology in the development of a Texas barrier island.

Submitted Articles

1. Menard, A.D., Cavallo-Medved, D., Jaffri, S., and **Houser**, C. (*Submitted*). Stress, coping and campus program use among self-identified sexual minority group students in science. Submitted to Journal of American College of Mental Health, November 2019.
2. Ménard, Soucie, Jaffri, **Houser** and Cavallo-Medved (*Submitted*). Concordance (or discordance) between students and staff/faculty perceptions of student stress in science. Manuscript submitted for publication.

3. Trimble, S., **Houser**, C., and Brander, R. (*Submitted*). Factors controlling the distribution of swimmers in winter on Bondi Beach. Submitted to *Coastal Management*, August 2019.
4. **Houser**, C., and Bornais, M. (*Submitted*). Student perceptions on the benefits and barriers to study abroad. Submitted to *Frontiers in Study Abroad*, September 2019.
5. Smith, A., **Houser**, C., Lehner, J., George, E., and Lunardi, B. (*Submitted*). Crowd-sourced identification of the beach-dune interface. Submitted to *Geomorphology*, April 2020.

Published Articles

1. Wernette, P., Lehner, J., and **Houser**, C. (Online First). What is 'real'? Identifying erosion and deposition in context of spatially variable uncertainty. Submitted to *Geomorphology*, April 2019.
2. Wernette, P., Houser, C., Lehner, J., and Weymer, B. (Online First, 2020) Investigating the Impact of Hurricane Harvey and Driving on Beach-Dune Morphology. Submitted to *Geomorphology*, March 2019.
3. **Houser**, C., Lehner, J., Wernette, P., and Cherry, N. (2019). Machine learning analysis of rip current warnings and rescues at Pensacola Beach, Florida. *Natural Hazards and Earth System Sciences*, 19, 2541-2549.
4. **Houser**, C., Vlodarchyk, B., and Wernette, P. (2019) Short Communication: Public Interest in Rip Currents Relative to other Natural Hazards: Evidence from Google Search Data. *Natural Hazards*, 97, 1395-1405.
5. Vlodarchyk, B., Olivito, A., and **Houser**, C. (2019) Spatial and temporal variation of surf drownings in the Great Lakes: 2010-2017. *Journal of Coastal Research*, Online First.
6. Barrineau, P., Dobreva, I., Bishop, M.P., and **Houser**, C. (2019). Deconstructing aeolian landscapes. *Catena*, 174, 452-468.
7. Wernette, P., **Houser**, C., Weymer, M.P. Bishop, M. Everett, and B. Reece. (2018) Long-range dependence in framework geology: Implications for barrier island resiliency. *Earth Surface Dynamics*, 6, 1139-1153.
8. Menard, A.D., **Houser**, C., Brander, R.W., Trimble, S., and Scaman, A. (2018) The psychology of beach users: importance of confirmation bias, action and intention to improving rip current safety. *Natural Hazards*, 94, 953-973.
9. Clifford, K., M., Brander, R.W., Trimble, S., and **Houser**, C. (2018) Beach safety knowledge and understanding of visiting international study abroad students to Australia. *Tourism Management*, 69, 487-497.

10. **Houser**, C. (2018) ESEX Communication: Barrier Response to Sea Level Rise and Storms. *Earth Surface Processes and Landforms*, 43, 2481-2483.
11. Wernette, P., S. Thompson, R. Eyler, H. Taylor, C. Taube, C. Decuir, A. Medlin, and C. **Houser**. (2018) Defining dunes: Evaluating how dune feature definitions impact dune interpretations from remote sensing. Submitted to *Journal of Coastal Research*, October 2017.
12. Weymer, B.A., Everett, M.E., Wernette, P., and **Houser**, C. (2018) Statistical modeling of the long-range dependent structure of barrier island framework geology and surface geomorphology. *Earth Surface Dynamics*, 6, 431-450.
13. **Houser**, C., Nunez, J., and Miller, K.C. (2018) Pathways to the Geosciences through 2YR Community Colleges: A Strategic Recruitment Approach being used at Texas A&M University. *Journal of Geoscience Education*, 66, 4-11.
14. **Houser**, C., Wernette, P., and Weymer, B. (2018) Scale dependent behavior of the foredune. *Geomorphology*, 303, 362-374.
15. Wernette, P., **Houser**, C., Weymer, B.A., Everett, M., Bishop, M.P., and Reece, B. (2018) Influence of a spatially complex framework geology on island geomorphology. *Marine Geology*, 398, 151-162.
16. Llopis, I., Echeverria, A.G., Trimble, S., Brannstrom, C., and **Houser**, C., (2018) Determining Beach User Knowledge of Rip Currents in Costa Rica. *Journal of Coastal Research*, 34, 1105-1115.
17. **Houser**, C. and Lemmons, K. (2018) Implicit bias in letters of recommendation for an undergraduate research internship. *Journal of Further and Higher Education*, 42-585-595.
18. **Houser**, C., Bishop, M., and Wernette, P. (2017) Short Communication: Multi-scale topographic anisotropy patterns on a barrier island. *Geomorphology*, 297, 153-158.
19. **Houser**, C., Bishop, M., and Lemmons, K., (2017) Teaching Complex concepts in physical geography through analytical reasoning. *Journal of Geoscience Education*, 65, 263-271.
20. **Houser**, C., Trimble, S., Brander, R., Brewster, B.C., Dusek, G., Jones, D., and Kuhn, J. (2017). Public Perceptions of a Rip Current Hazard Education Program: 'Break the Grip of the Rip!'. *Natural Hazards and Earth Systems Science*, 17, 1003-1024
21. Jewell, M., **Houser**, C., Trimble, S., (2017) Phases of blowout initiation and stabilization on Padre Island revealed through ground-penetrating radar and remotely sensed imagery. *Physical Geography*, 38, 556-577.
22. **Houser**, C., Brander, R., Brannstrom, C., Trimble, S., and Flaherty, J. (2016) Case Study of Rip Current Knowledge amongst Students Participating in a Study Abroad Program. *Frontiers: The Interdisciplinary Journal of Study Abroad*, XXVIII, 42-60.

23. Weymer, B.A., Everett, M.E., **Houser**, C., Wernette, P., and Barrineau, P. (2016) Differentiating tidal and groundwater dynamics from barrier island framework geology: Testing the utility of portable multi-frequency electromagnetic induction profilers. *Geophysics*, 81(5), E347-E361
24. Wernette, P., **Houser**, C., and Bishop, M., (2016) Technical Communication: An automatic approach for extracting barrier island morphology from digital elevation models. *Geomorphology*, 262, 1-7.
25. Barrineau, P., Dobroveya, I., Bishop, M., and **Houser**, C. (2016) Deconstructing polygenetic landscapes through a multi-scale analysis of a digital elevation model for the South Texas Sand Sheet. *Geomorphology*, 258, 51-57.
26. Brannstrom, C. and **Houser**, C. (2015) Riding the rip. *Journal of Geography in Higher Education*, 39, 527-542. doi: 10.1080/03098265.2015.1084497.
27. Pelletier, J.D., Murray, A.B., Pierce, J.L., Bierman, P.R., Breshears, D.D., Crosby, B.T., Ellis, M., Foufoula-Georgiou, E., Heimsath, A.M., **Houser**, C., Lancaster, N., Marani, M., Merritts D.J., Moore, L.J., Pederson, J.L., Poulos, M.J., Rittenour, T.M., Rowland, J.C., Ruggerio, P., Ward, D.J., Whipple, K.X., Wickert, A.D., and Yager, E.M. (2015) Forecasting landscape response to future climate and land-use changes: An assessment. *Earth's Future*, 3, 220-251.
28. **Houser**, C., Murphy, T. and Labude, D., (2015) Alongshore correspondence of beach users and rip channels at Pensacola Beach, Florida. *Natural Hazards*, 78, 2175-2183.
29. **Houser**, C., Garcia, S., and Torres, J. (2015) Effectiveness of Geosciences Exploration Summer Program (GEOX) for increasing awareness and knowledge of Geosciences. *Journal of Geoscience Education*, 63, 116-126.
30. Weymer, B.A., **Houser**, C., and Giardino, R. (2015) Poststorm evolution of beach-dune morphology: Padre Island National Seashore, Texas. *Journal of Coastal Research*, 31, 634-644.
31. Arozarena, I., **Houser**, C., Gutierrez Echeverria, A. and Brannstrom, C. (2015) The rip current hazard in Costa Rica. *Natural Hazards*, 77, 753-768.
32. **Houser**, C., Bishop, M.P. and Barrineau, P. (2015) ESEX: Characterizing the instability of aeolian landscapes using analytical reasoning. *Earth Surface Processes and Landforms*, 40, 696-705.
33. **Houser**, C., Wernette, P., Rentschler, T., Jones, H., Hammond, B. and Trimble, S. (2015) Post-storm beach and dune recovery: implications for barrier island resilience. *Geomorphology*, 234, 54-63.
34. Weymer, B., Everett, M.E., de Smet T.S., and **Houser**, C. (2015) Review of Electromagnetic

- Induction for Mapping Barrier Island Framework Geology. *Sedimentary Geology*, 321, 11-24.
35. **Houser**, C., Trimble, S., and Morales, B. (2015) Influence of blade flexibility on the drag coefficient of aquatic vegetation. *Estuaries and Coasts*, 38, 569-577.
 36. Brannstrom, C., **Houser**, C., Lee, H., Trimble, S., and Santos, A. (2015) "You can't see them from sitting here:" Evaluating beach user understanding of a rip current warning sign. *Applied Geography*, 56, 61-70.
 37. **Houser**, C. Lemmons, K. and Cahill, T. (2014) Assessment of student and faculty mentor perceptions of an international undergraduate research program in physical geography. *Journal of Geography in Higher Education*, 38, 582-594.
 38. **Houser**, C., D'Ambrosio, T., Smith, B., Bouchard, C., Darbonne, K., Hunter, S., and Heyman, W. (2014) Shoreline change between 1960 and 2012 within the Sapadilla Cayes Marine Park, Mesoamerican Barrier Reef, Belize. *Physical Geography*, 35, 335-354.
 39. Jewell, M., **Houser**, C., Trimble, S. (2014) Initiation and evolution of blowouts within Padre Island National Seashore. *Ocean and Coastal Management*, 95, 156-164.
 40. Brannstrom, C., Trimble, S., Santos, A., and Lee, H., and **Houser**, C., (2014) Beach user ability to identify a rip current and hazardous surf conditions. *Natural Hazards*, 72, 1123-1138.
 41. Lamont, M.M., and **Houser**, C., (2014) Spatiotemporal distribution of loggerhead turtle nests and impacts from coastal armoring along a highly dynamic beach in the northern Gulf of Mexico. *Journal of Experimental Marine Biology and Ecology*, 453, 98-107.
 42. Johnson, J., Cairns, D., and **Houser**, C. (2013) Coastal marsh vegetation assemblages of Galveston Bay: insights for the East Texas Chenier Plain. *Wetlands*, 33, 861-870.
 43. **Houser**, C., Arnott, R., Ulzhöfer, S., and Barrett, G (2013) Nearshore Circulation over Transverse Bar and Rip Morphology with Oblique Wave Forcing. *Earth Surface Processes and Landforms*, 38, 1269-1279.
 44. **Houser**, C. (2013) Alongshore variation in beach-dune morphology: Implications for barrier island response. *Geomorphology*, 199, 48-61.
 45. Sherman, D.J., Hales, B., Potts, B., Liu, H., Ellis, J., and **Houser**, C. (2013) Impacts of Hurricane Ike on the beaches of the Bolivar Peninsula, Texas, USA. *Geomorphology*, 199, 62-81.
 46. **Houser**, C., Lemmons, K., and Cahill, T. (2013) Role of the faculty mentor in undergraduate research experiences. *Journal of Geoscience Education*, 61, 297-305.

47. Sherman, D.J., **Houser**, C., Ellis, J.T., Farrell, E.J., Li, B., and Maia, L.P. (2013) Characterization of Aeolian streamers using time-average videography. *Journal of Coastal Research* SI65, 1331-1336.
48. Caldwell, N., **Houser**, C., and Meyer-Arendt, K. (2013) Ability of beach users to identify rip currents at Pensacola Beach, Florida. *Natural Hazards*, 68, 1041-1056.
49. Sherman, D., **Houser**, C., and Baas, A. (2013) Electronic field equipment in process geomorphology. In: John F. Shroder (ed.) *Treatise on Geomorphology*, 14, pp. 195-221. San Diego: Academic Press.
50. **Houser**, C., and Ellis, J. (2013) Morphodynamic Systems: Beach and Dune Interaction. In: John F. Shroder (ed.) *Treatise on Geomorphology*, 10, pp. 267-288. San Diego: Academic Press.
51. **Houser**, C. (2013) Flow separation over a prograding beach step at Pensacola Beach, Florida. *Journal of Coastal Research*, 29, 1247-1256.
52. **Houser**, C., Labude, B., Haider, L., and Weymer, B. (2012) Impacts of Driving on the Beach: Case Studies from Assateague Island and Padre Island National Seashores. *Ocean and Coastal Management*, 71, 33-45.
53. **Houser**, C. (2012) Technical Communication: Monitoring bed elevation change in aeolian environments using ultrasonic distance sensors. *Aeolian Research*, 6, 75-82.
54. **Houser**, C. (2012) Feedback between ridge and swale bathymetry and barrier island storm response and transgression. *Geomorphology*, 173/174, 1-16.
55. Ezer, T., Heyman, W.D., **Houser**, C., and Kjerfve, B (2012) Extreme flows and unusual water level rise near a Caribbean coral reef: was this a "perfect storm"? *Ocean Dynamics*, 62, 1043-1057.
56. Barrett, G., and **Houser**, C. (2012) Identifying hot spots of rip current activity using wavelet analysis at Pensacola Beach, Florida. *Physical Geography*, 33, 32-49.
57. **Houser**, C., Brannstrom, C., Quiring, S., and Lemmons, K. (2011) Study abroad field trip improves test performance through engagement and new social networks. *Journal of Geography in Higher Education*, 35, 513-528.
58. **Houser**, C. (2011) Sediment resuspension by vessel-generated waves along the Savannah River, Georgia. *Journal of Waterway, Port, Coastal and Ocean Engineering*, 137, 246-257.
59. McKinney, N., **Houser**, C., and Meyer-Arendt, K (2011) Direct and indirect mortality in Florida during the 2004 hurricane season. *Journal of Biometeorology*, 55, 533-546.
60. **Houser**, C., Barrett, G., and Labude, D. (2011) Alongshore variation in the rip current hazard

at Pensacola Beach, Florida. *Natural Hazards*, 57, 501-523.

61. **Houser**, C., and Mathew, S. (2011) Variability in foredune height depends on the alongshore correspondence of transport potential and sediment supply. *Geomorphology*, 125, 62-72.
62. Ezer, T., Heyman, W.D., **Houser**, C., and Kjerfve, B. (2011) Modeling and observations of high-frequency flow variability and internal waves at a Caribbean reef spawning aggregation site. *Ocean Dynamics*, 61, 581-598.
63. Legates, DR, Mahmood, R, Levia DF, DeLiberty TL, Quiring, S, **Houser**, C., and Nelson, F.E. (2010) Soil Moisture: A central and unifying theme in Physical Geography. *Progress in Physical Geography*, 35, 65-86.
64. **Houser**, C. and Barrett, G. (2010) Divergent behavior of the swash zone in response to different foreshore slopes and nearshore states. *Marine Geology*, 271, 106-118.
65. **Houser**, C., and Hill, P. (2010) Wave attenuation across an intertidal sand flat: implications for mudflat development. *Journal of Coastal Research*, 26, 403-411.
66. **Houser**, C., and Hill, P. (2010) Sediment Transport on Roberts Bank: A Sandy Intertidal Flat on the Fraser River Delta. *Journal of Coastal Research*, 26, 333-341.
67. **Houser**, C. (2010) Relative importance of vessel and wind waves to salt marsh erosion at Fort Pulaski National Monument. *Journal of Coastal Research*, 26,230-240.
68. **Houser**, C. (2009) Synchronization of transport and supply in beach-dune interaction. *Progress in Physical Geography*, 33, 733-746. doi:10.1177/0309133309350120
69. Bradley, K., and **Houser**, C. (2009) Relative velocity of seagrass blades: Implications for wave attenuation in low energy environments. *Journal of Geophysical Research, Earth Surface*, 114, F01004, doi: 10.1029/2007JF000951.
70. **Houser**, C. and Barrett, G. (2009). Wave-scale changes in bed elevation of an intermediate foreshore. *Journal of Coastal Research*, SI 56, 64-68.
71. **Houser**, C., and Hamilton, S. (2009) Sensitivity of post-hurricane beach and dune recovery to event frequency. *Earth Surface Processes and Landforms*, 34, 613-628.
72. **Houser**, C. (2009) Geomorphological controls on road damage during Hurricanes Ivan and Dennis. *Journal of Coastal Research*, 25, 558-568.
73. **Houser**, C., Hapke, C. and Hamilton, S., (2008) Controls on Coastal Dune Morphology, Shoreline Erosion and Barrier Island Response to Extreme Storms. *Geomorphology*, 100, 223-240.
74. **Houser**, C., Hobbs, C. and Saari, B. (2008) Post-hurricane airflow and sediment transport over

a recovering dune. *Journal of Coastal Research*, 24, 944-953.

75. **Houser**, C., and Greenwood, B. (2007) Onshore migration of a swash bar. *Journal of Coastal Research*, 23, 1-14.
76. Greenwood, B., Permanand-Schwartz, A., and **Houser**, C. (2006) Emergence and migration of a nearshore bar: Sediment flux and morphological change on a multi-barred beach in the Great Lakes. *Geographie Physique et Quaternaire*, 60, 31-47.
77. **Houser**, C., Greenwood, B., and Aagaard, T. (2006) Divergent Response of an Intertidal Swash Bar. *Earth Surface Processes and Landforms*, 31, 1775-1791.
78. Liebens, J., Mohrherr, C., Rao, K., and **Houser**, C. (2006) Magnitude, spatial distribution and origin of pollution in an urban bayou. *Water, Air and Soil Pollution*, 174, 235-263.
79. **Houser**, C., and Greenwood, B. (2005) Hydrodynamics and sediment transport within the inner surf zone of a lacustrine multiple-barred nearshore. *Marine Geology*, 218, 37-63.
80. **Houser**, C., and Greenwood, B. (2005) Profile response of a lacustrine multiple-barred nearshore to a sequence of storm events. *Geomorphology*, 69, 118-137.
81. Gough, B., and **Houser**, C. (2005) Climate memory and long-range forecasting of sea ice conditions in Hudson Strait. *Polar Geography*, 29, 17-26.
82. Bauer, B., **Houser**, C., and Nickling, W.G. (2004) Analysis of velocity profiles from wind tunnel experiments with saltation. *Geomorphology*, 59, 81-98.
83. **Houser**, C., and Gough, B. (2004) Variations in Sea Ice in the Hudson Strait: 1971-1999. *Polar Geography*, 1, 1-14.
84. **Houser**, C., and Nickling, W.G. (2000) The emission and vertical flux of PM₁₀ from a clay-crusted surface. *Sedimentology*, 48, 255-267.
85. **Houser**, C., and Nickling, W.G. (2000) The factors influencing the abrasion efficiency of saltating grains. *Earth Surface Processes and Landforms*, 26, 491-505.

Books and Textbooks

1. Davidson-Arnott, R., Bauer, B.O., and **Houser**, C. (2019) *Introduction to Coastal Processes and Geomorphology* 2nd Edition. 523 pp.
2. Giardino, R., and **Houser**, C. (Eds) (2015) *Principles and Dynamics of the Critical Zone*. Elsevier, p. 674.

Book Chapters

1. UAV CHAPTER

2. Trimble, S., and **Houser**, C. (2018). Seawalls and signage: how beach access management affects rip current safety. In: *Beach Management Tools*, edited by O. Cervantes, Springer, 497-524.
3. **Houser**, C., Barrineau, P., Hammond, B., Saari, B., Rentschler, E., Trimble, S., Wernette, P., Weymer, B., and Young, S. (2018) Role of the foredune in controlling barrier island response to sea level rise. *Barrier Islands*, edited by Moore, L., and Murray, B., pp. 175-203.
4. Giardino, J.R., and **Houser**, C. (2015) Introduction to the Critical Zone. In: *Principles and Dynamics of the Critical Zone*, edited by Houser, C., and Giardino, R., Elsevier, pp. 1-13.
5. Barrineau, P., Wernette, P., Trimble, S., Weymer, B., Hammond, B., and Houser, C. (2015). Critical zone of coastal barrier islands. In: *Principles and Dynamics of the Critical Zone*, edited by Houser, C., and Giardino, R., pp. 497-522.
6. Bishop, M., Dobreva, I., and **Houser**, C. (2015). Remote sensing of process domains in the critical zone. In: *Principles and Dynamics of the Critical Zone*, edited by Houser, C., and Giardino, R., Elsevier, pp. 523-562.
7. Houser, C., Caldwell, N., and Meyer-Arendt, K. (2011) Hot times at Hot spots: The rip current hazard at Pensacola Beach, Florida. Invited submission to refereed book *Rip Currents: Beach Safety, Physical Oceanography and Wave Modeling*, edited by Steven Leatherman and John Fletemeyer, CRC Press, pp 175-198.
8. Houser, C., (2010) Response and Recovery of the National Seashores to Extreme Storms: Sensitivity to the Frequency of Storm Events. In: *National Parks: Vegetation, Wildlife and Threats*, Nova Publishers.

Conference Proceedings

1. Weymer, B.A., Barrineau, P., Houser, C., Everett, M., and Jewell, M. (2013) Using GPR and EM to characterize barrier island transgression along the Texas Coast. *Coastal Geophysics Workshop*, Austin, Texas, September 2013.
2. Jewell, M., Weymer, B., Houser, C., Everett, M., and Barrineau, P. (2013) Characterizing coastal dune blowouts using GPR in combination with LiDAR and historical aerial photographs. *Coastal Geophysics Workshop*, Austin, Texas, September 2013.
3. Houser, C., Hamilton, S., Meyer-Arendt, K., and Oravetz, J. (2006) EOF analysis of barrier island morphological change during Hurricane Ivan. *Coastal Sediments '07*, May 2006.
4. Shaw, A., Houser, C., Hill, P. and Lintern, G. (2005) Predicting tidal flat profile response to climate change and associated sea level rise. *Proceedings of the 2005 Canadian Coastal*

Conference. November 2005, Halifax, Nova Scotia.

5. Greenwood, B., and Houser, C., (2005) Wave set up, undertow and frequency dependent sediment flux on a multi-barred lacustrine shoreface. *International Coastal Symposium*. April 2005, Hornafjörður, Iceland.
6. Shaw, A.L., Lintern, D.G., Hill, P.R., Houser, C., (2005) Factors Controlling Tidal Flat Response to Sea Level Rise: Roberts Bank, British Columbia, Canada. *Proceedings, Coastal Dynamics 2005, 5th International Conference*, April 4-8, 2005, Barcelona, Spain (ed. A. Sanchez-Arcilla) (doi 10.1061/40855(214)40).
7. Hill, P.R., Houser, C., Lintern, D.G., Shaw, A., Solomon, S., Sutherland, T., Levings, C., and Tansey, J. (2004). Sensitivity of the Roberts Bank tidal flats (Vancouver, Canada) to climate change and anthropogenic alteration. *Delivering Sustainable Coasts: Connecting Science and Policy, Proceedings of Littoral 2004*, Cambridge Publications, p. 648-649.
8. Houser, C., and Greenwood, B. (2003) Role of secondary (harmonic) wave generation in the morphodynamics of a multiple-barred nearshore. *Proceedings of the 2003 Canadian Coastal Conference*. October 2003, Kingston, Ontario.
9. Houser, C., and Greenwood, B. (2003) Response of a nearshore to a sequence of storm events. *Coastal Sediments, 2003*. May 2003, Clearwater, Florida.
10. Greenwood, B., Houser, C., Aagaard, T. & Nielsen, J., (2003b): Storm Surge in the Danish Wadden Sea Intertidal Zone: hydrodynamics and sediment transport. *Proceedings Coastal Sediments '03*, Clearwater, Florida, ASCE, New York, CD-ROM, 14 pp.
11. Bauer, B., Houser, C., and Nickling, W.G. (2002) Analysis of velocity profiles from wind tunnel experiments with Saltation. *International Conference on Aeolian Research*. July 2002, Lubbock, Texas.
12. Greenwood, B., Houser, C., Aagaard, T., and Nielsen, J. (2001) Storm Surge in the Danish Wadden Sea: Sediment Flux and Morphodynamic Response on the Upper Shoreface. *Proceedings of the 2001 Canadian Coastal Conference*. May 2001, Quebec City, Quebec.

Invited Conference Presentations

1. **Houser**, C. Alongshore Variation in Beach and Dune Coupling. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
2. **Houser**, C., Wernette, P., and Weymer, B. Scale dependent behavior of the foredune: Implications for barrier island response to storms and sea level rise. *European Geophysical Union Annual Meeting*, Vienna, April 16-20, 2017.

3. **Houser, C., Wernette, P., and Weymer, B.** Scale dependent behavior of the fordune: Implications for barrier island response to storms and sea level rise. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2015.
4. **Houser, C.** Post-storm recovery as a control on barrier island resilience and management. *Dune Management Challenges on Developed Coasts*, Kitty Hawk, North Carolina, October 26-28, 2015.
5. **Houser, C.** Impacts of driving on the beach at Padre Island National Seashore: Implications for island response to sea level rise. *Texas Beaches and Dunes: Science and Management Forum*, Corpus Christi, September 24-25, 2015.
6. **Houser, C.** Variation in coastal dune morphology: Implications for storm response. *Binhampton Geomorphology Conference*, Newark New Jersey, October 17-20, 2013.
7. **Houser, C.** Recovery as the key to barrier island resiliency. *NSF Workshop on Landscape Response to Climate Change*, Tuscon, Arizona, September 24-27, 2013.
8. **Houser, C., Weymer, B., Trimble, S., and Barrineau, P.** Interaction of beach, dune and nearshore systems: implications for barrier island morphology. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2013.
9. **Houser, C. and Hill, P.** Wave attenuation and sediment transport over an intertidal sand flat on the Fraser River Delta. *American Geophysical Union Annual Meeting*, San Francisco, December 11-17, 2010.
10. **Houser, C.** Response and recovery of a barrier island to extreme storms. *Geological Society of America*, Denver, Colorado, October 31-November 4, 2010.
11. **Houser, C., Caldwell, N., and Meyer-Arendt, K.** Hot times at Hot spots: The rip current hazard at Pensacola Beach, Florida. *First International Symposium on Rip Currents*, Miami, Florida, February 17-19, 2010.

Conference Presentations

1. **Locknick, S., and Houser, C.** Correspondence Between Beach User Perception and Rip Currents in Prince Edward Island. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
2. **George, E., Lehner, J.D., Wernette, P., and Houser, C.** Fuzzy Boundaries: Classifying the Beach-dune interface. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
3. **Wernette, P., and Houser, C.** Geologic Controls on Rip Current Location and Formation. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.

4. Cherry, N., and Houser, C. Machine learning assessment of lifeguard perception of rip-risks. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
5. Lehner, J.D., Wernette, P., Houser, C. Identifying Foredune Morphometrics through a landform extraction machine learning approach. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
6. Smith, A., Houser, C., Chittle, B., Krueger, T. Collating and Prediting North American Beach-Dune Interactions through Time and Space. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
7. Lunardi, B., Lehner, J., Houser, C., Wernette, P., George, E. Alongshore coupling of eco-geomorphological variables of a beach-dune system. *American Geophysical Union Annual Meeting*, San Francisco, December 9-15, 2019.
8. Wernette, P., Lehner, J., and Houser, C. What is real? Identifying patterns of erosion and deposition in the context of spatially variable uncertainty. *American Association of Geographers Annual Meeting*, 2018.
9. Wernette, P., Houser, C., Lehner, J., and Evans, A. Human activity, framework geology and barrier island resiliency: Lessons from Hurricane Harvey. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2018.
10. Lehner, J., Wernette, P., and Houser, C. Machine learning approach to predicting foredune morphometrics. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2018.
11. Houser, C., Figlus, J., and Hammond, B. Post-storm recovery of the foredune: Implications for barrier island resiliency. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2018
12. **Houser**, C., and Trimble, S. Seawalls and signage: how beach access management affects rip current safety. *Canadian Coastal Conference*, 2018.
13. **Houser**, C., Wernette, P., and Weymer, B. Scale dependent behavior of the fordune: Implications for barrier island response to storms and sea level rise. *Canadian Coastal Conference*, 2018.
14. Locknick, S., Scaman, A., and Houser, C. A study of rip current warning dissemination methods. *American Association of Geographers Annual Meeting*, 2018.
15. Wernette, P., and Houser, C., Enhancing professional development through vertically tiered undergraduate research. *American Association of Geographers Annual Meeting*, 2018.
16. Burdett, H., Lehner, J., Houser, C, Let's get fuzzified. *American Association of Geographers Annual Meeting*, 2018.

17. Lehner, J., Wernette, P., and Houser, C. Machine learning approach to predicting coastal geomorphology. *American Association of Geographers Annual Meeting*, 2018.
18. Wernette, P., Houser, C., Evans, A. Management implications of Hurricane Harvey for Padre Island National Seashore. *American Association of Geographers Annual Meeting*, 2018.
19. Vlodarchyk, B., Houser, C., Lehner, J., and Wernette, P. Predicting drownings on the great lakes using machine learning. *American Association of Geographers Annual Meeting*, 2018.
20. Houser, C., and Locknick, S. Rip currents within the Canadian Curriculum. *American Association of Geographers Annual Meeting*, 2018.
21. Wernette, P., Houser, C., Weymer, B., Everett, M., Bishop, M., Reece, B. Spatially variable framework geology as a driver of barrier island development. *American Association of Geographers Annual Meeting*, 2017.
22. Houser, C., Wernette, P., and Weymer, B., Scale dependent of the foredune: Implications for barrier island response to storms and sea level rise. *American Association of Geographers Annual Meeting*, 2017.
23. Trimble, S., Houser, C., and Bishop, B. Degree of anisotropy as an automated indicator of rip channels in high resolution bathymetric models. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2017.
24. Evans, A., Wernette, P, and Houser, C. Coastal erosion at Padre Island: Insights from UAV Surveys after Hurricane Harvey. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2017.
25. Locknick, S., and Houser, C. Beach user perceptions of the rip current hazard on the Great lakes. *American Association of Geographers Annual Meeting*, 2017.
26. Burdett, H., and Houser, C. No speak, no hear, no see: Improving warning systems for rip currents on the Great Lakes. *American Association of Geographers Annual Meeting*, 2017.
27. Scaman, A., and Houser, C. Slap you in the face: A study of rip current warning dissemination methods. *American Association of Geographers Annual Meeting*, 2017.
28. Vlodarchyk, B, and Houser, C. Spatial and temporal variation in drownings on the Great Lakes: 2010-2016. *American Association of Geographers Annual Meeting*, 2017.
29. Barrineau, P., and Houser, C., Desertification and dune activity in South Texas. *American Association of Geographers Annual Meeting*, 2017.
30. Olivito, A., and Houser, C. Identifying beach and nearshore states at “Hot spots” drowning locations in the Great Lakes. *American Association of Geographers Annual Meeting*, 2017.

31. Wernette, P., Houser, C., and Quick, C. Team-based multidisciplinary research scholarship in the Geosciences. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
32. Lehner, J., Wernette, P., Bishop, M., and Houser, C. Assessing barrier island resiliency through multi-scale topographic anisotropy distribution patterns. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
33. Hartman, K., Trimble, S., Bishop, M., and Houser, C. Assessment of rip-current hazards using alongshore topographic anisotropy at Bondi Beach, Australia. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
34. Houser, C., Bishop, M., and Wernette, P. Multi-scale topographic anisotropy patterns with post-storm barrier island recovery. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
35. Flores, P., and Houser, C. Alongshore variation in the depth of activation: Implications of Oil Residence Time. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
36. Trimble, S., and Houser, C. Mapping and mitigating the international rip current health hazard. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
37. Wernette, P., Houser, C., Weymer, B., Bishop, M., Everett, M., and Reece, R. Framework geology as a driver of barrier island evolution. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
38. Tuttle, L., Wernette, P., and Houser, C. Updating the framework geology of Padre Island National Seashore: Validation of geophysical surveys through sediment cores. *American Geophysical Union Annual Meeting*, San Francisco, December 8-14, 2016.
39. Weymer, B., Everett, M.E., Wernette, P., and **Houser**, C. Statistical modeling of EMI spatial data series and LiDAR-derived morphometrics to understand the large-scale framework geology controls on barrier island transgression. *23rd Electromagnetic Induction Workshop*, Chiang Mai, Thailand, August 14-20, 2016.
40. Barrineau, P. and **Houser**, C. Deconstructing a Polygenetic Landscape Using LiDAR and Multi-Resolution Analysis. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2015.
41. Weymer, B., Everett, M., Wernette, P., and **Houser**, C. Is barrier island geologic framework fractal? Evidence from Padre Island National Seashore, Texas, USA. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2015.
42. Trimble, S., **Houser**, C., Brander, R., and Chirico, P. Identifying rip currents from remotely

sensed imagery. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2015.

43. Bishop, M.P., **Houser**, C., and Lemmons, K. Transforming Undergraduate Education through the use of Analytical Reasoning (TUETAR). *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2015.
44. Wernette, P., Weymer, B., **Houser**, C., Bishop, M.P., Everett, M., and Reece, R. Using wavelet decomposition to assess the development of Padre Island National Seashore. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2015.
45. Wernette, P., **Houser**, C., and Bishop, M. Extracting barrier island morphology from Digital Elevation Models: An Automated Approach. *70th Annual Meeting of the Southeastern Division of the Association of American Geographers*, November 22-24, 2015.
46. **Houser**, C., Wernette, P., and Weymer, B. Scale dependent behavior of the foredune: Implications for barrier island response to storms and sea level rise. *70th Annual Meeting of the Southeastern Division of the Association of American Geographers*, November 22-24, 2015.
47. Trimble, S., **Houser**, C., and Brander, R. Perceptions of the rip current hazard and observations of beachgoer behavior on Bondi Beach, Sydney. *70th Annual Meeting of the Southeastern Division of the Association of American Geographers*, November 22-24, 2015.
48. **Houser**, C., Wernette, P., Rentschlar, E., Jones, H., and Hammond, B. Post-hurricane beach and dune recovery: implications for barrier island resilience. Association of American Geographers Annual Meeting, April 2015.
49. Wernette, P., Weymer, B., **Houser**, C., Bishop, M., and Everett, M. Integration of geophysics and LiDAR to assess the role of geologic inheritance in barrier island evolution. Association of American Geographers Annual Meeting, April 2015.
50. Hammond, B., and **Houser**, C. Using foredunes to quantify rate of recovery of Assateague Island, MD. Association of American Geographers Annual Meeting, April 2015.
51. Barrineau, P., and **Houser**, C., Using remotely sensed data and geophysical surveys to characterize stabilized Aeolian landscapes. Association of American Geographers Annual Meeting, April 2015.
52. Weymer, B.A., **Houser**, C., Giardino, J., Barrineau, P., Everett, M., and Bishop, M. The role of geologic inheritance on storm impacts along the south Texas Coast, USA. European Geophysical Union Annual Meeting, Vienna.
53. Weymer, B.A., Barrineau, C.P., Bishop, M.P., Everett, M.E., Tchakerian, V.P., and **Houser**, C. Using mixed morphometrics and near-surface geophysics to characterize geomorphic evolution of the South Texas coastal zone. *American Geophysical Union Annual Meeting*, San

Francisco, December 9-13, 2013.

54. Garcia, S., and **Houser**, C. Effectiveness of Geosciences Exploration Summer Program (GEOX) for increasing awareness and Broadening Participation in Geosciences. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2013.
55. **Houser**, C., Cahill, A., and Lemmons, K. A new approach to assess student perceptions of gains from a REU program. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2013.
56. Weymer, B.A., Barrineau, P., **Houser**, C., Everett, M., and Jewell, M. (2013) Using GPR and EM to characterize barrier island transgression along the Texas Coast. Coastal Geophysics Workshop, Austin, Texas, September 2013.
57. Jewell, M., Weymer, B., **Houser**, C., Everett, M., and Barrineau, P. (2013) Characterizing coastal dune blowouts using GPR in combination with LiDAR and historical aerial photographs. Coastal Geophysics Workshop, Austin, Texas, September 2013.
58. **Houser**, C., Bishop, M., Dobрева, I., Barrineau, P., and Weymer, B., Characterizing the instability of aeolian environments using analytical reasoning. *American Geophysical Union Annual Meeting*, San Francisco, December 9-13, 2013.
59. **Houser**, C. International Research Experiences for Undergraduates. *Southwestern Division of the American Association of Geographers*, October 24-26, 2013.
60. Mora, R., Giardino, J.R., Heaney, M.J., Price, A., Johnson, H., **Houser**, C., and Marcantonio, F. Geological mapping in the field through a unique bi-national approach to teaching: Texas A&M University and the University of Costa Rica. *Geological Society of America Meeting*, Denver, October 27-30, 2013.
61. **Houser**, C., Cahill, A., Gonzalez, E., Brooks, S., Frauenfeld, O, Miller, G., Moore, G., Rapp, A., Roark, B., Schade, G., Schmucaher, C., Washington-Allen, R., Brumbelow, K., and Lemmons, K.. Eco-hydrology of a tropical montane forest, a REU site hosted by Texas A&M University in Costa Rica. *Association for Tropical Biology and Conservation Annual Meeting*, San Jose, Costa Rica, June 24-27, 2013.
62. Washington, R.A., Buckwalter, E.H., Moore, G.W., Burns, J., Dennis, A.R., Dodge, O., Guffin, E.C., Morris, E.R., Oien, R.P., Orozco, G., Peterson, A., Teale, N.G., Shibley, N.C., Tourtellote, N., **Houser**, C., Brooks, S., Brumbelow, J.K., Cahill, A.T., Frauenfeld, O.W., Gonzalez, E., Hallmark, C.T., McInnis, K.J., Miller, G.R., Morgan, C., Quiring, S., Rapp, A., Roark, B., Delgado, A., Ackerson, J.P., and Arnott, R. Exploratory water budget analysis of a transitional premontane cloud forest in Costa Rica through undergraduate research. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.

63. **Houser**, C., Cahill, A.T., and Lemmons, K. The role of the faculty mentor to the REU experience: insights from an international REU. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.
64. Weymer, B.A., **Houser**, C., and Giardino, R. Alongshore variability in beach planform, grain-size distribution and foredune height of an embayed beach: Shoalwater Bay, Queensland, Australia. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.
65. Arnott, R., and **Houser**, C. Determining rip current circulation patterns and velocities in the vicinity of a groin using GPS equipped drogues. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.
66. Barrineau, C.P., Tchakerian, V., and **Houser**, C. Aeolian processes of the Pismo-Oceano dune complex, California. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.
67. Jewell, M., and **Houser**, C., Holocene Development and progression of aeolian blowouts on Padre Island National Seashore. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.
68. **Houser**, C., Sherman, D. and Ellis, J. Video analysis of Aeolian streamers. *American Geophysical Union Annual Meeting*, San Francisco, December 3-7, 2012.
69. Trimble, S., Brannstrom, C., **Houser**, C., Lee, H., and Santos, A. Perception of rip current hazard at Galveston Island. Annual Meeting of the *Southwest Division of the American Association of Geographers*, 25-27 October 2012, Las Cruces, NM
70. Jewell, M., and **Houser**, C., Holocene Development and progression of aeolian blowouts on Padre Island National Seashore. Annual Meeting of the *Geological Society of America*, Charlotte, North Carolina, November 4-7, 2012.
71. Weymer, B.A., **Houser**, C., and Giardino, J.R., The evolution of beach-dune morphology: Padre Island National Seashore Texas. Annual Meeting of the *Geological Society of America*, Charlotte, North Carolina, November 4-7, 2012.
72. **Houser**, C., Labude, B., Haider, L., and Weymer, B. Impacts of Driving on the Beach: Case Studies from Assateague Island and Padre Island National Seashores. Annual Meeting of the *Geological Society of America*, Charlotte, North Carolina, November 4-7, 2012.
73. **Houser**, C. and Saari, B., Biogeomorphic feedback in barrier island response and recovery to extreme storms, *21st Biennial Conference of the Coastal and Estuarine Research Federation*, November 6-10, 2011.
74. Ezer, T., Heyman, W., and **Houser**, C., High-resolution simulations of flow-topography interactions near coral reefs and potential implications for Caribbean fish spawning aggregations, 3rd International Workshop on Modeling the Ocean, Jun 6-9, 2011, Qingdao,

China.

75. **Houser, C.**, Rip Current Hazard at Pensacola Beach. *Association of American Geographers 107th Annual Meeting*, Seattle, Washington, April 14-18, 2011.
76. **Houser, C.**, Linking beach-dune interaction with barrier island transgression. *American Geophysical Union Annual Meeting*, San Francisco, December 11-17, 2010.
77. **Houser, C.**, Flow separation over a prograding beach step. *Association of American Geographers 106th Annual Meeting*, Washington, DC, April 14-18, 2010.
78. **Houser, C.**, Alongshore variation in dune morphology and storm impact in national seashores depends on the correspondence of transport potential and sediment supply. *Geological Society of America: Northeast*, Baltimore, March 13-15, 2010.
79. **Houser, C.**, Rip Current Hazard at Pensacola Beach. *1st International Rip Current Symposium*, Miami, Florida, February 17-19, 2010.
80. **Houser, C.**, Managing the natural recovery of coastal systems following extreme storms. *Annual Meeting of the George Wright Society*, Portland, Oregon, March 2-6, 2009.
81. **Houser, C.**, Wave by wave changes in the swash zone. Annual Meeting of the *Geological Society of America*, Houston, Texas, October 5-10, 2008.
82. **Houser, C.**, Post hurricane beach and dune recovery. *Association of American Geographers 104th Annual Meeting*, Boston, Massachusetts, April 15-19, 2008.
83. **Houser, C.**, Linking Dune morphology on a barrier island to transverse Bars on the inner shelf. *Association of American Geographers 103rd Annual Meeting*, San Francisco, California, April 17-23, 2007.
84. Meyer-Arendt, K., Oravetz, J., and **Houser, C.**, Response of the Mississippi barrier islands to Hurricane Katrina. *Association of American Geographers 103rd Annual Meeting*, San Francisco, California, April 17-23, 2007.
85. Hamilton, S., and **Houser, C.**, LiDAR analysis of morphological changes from Hurricane Ivan *Association of American Geographers 103rd Annual Meeting*, San Fransisco, California, April 17-23, 2007.
86. **Houser, C.** Geologic controls on Hurricane Damage and Dune Recovery. *Geological Society of America, Southeast Division Annual Meeting*, Savannah, Georgia, March 29-30, 2007.
87. **Houser, C.**, Hobbs, C., Saari, B. Post-hurricane airflow and sediment transport over a recovering dune. *International Conference on Aeolian Research*, University of Guelph, Guelph, Ontario, July 24-28, 2006.

88. Hill, P, **Houser, C.**, Lintern, G., Shaw, A., Sutherland, T., Levings, C., Butler, R., and Elner, R., 2005. Impacts of sea level rise on the tidal flats of the Fraser River Delta. *Natural Resources of Canada Climate Change Workshop*, Ottawa, Ontario, September 13-15, 2005.
89. **Houser, C.**, Walker, I., and Abeyvirigunawardena, D. 2005. Formation and behaviour of intertidal bar morphology. *Annual Meeting of the Southeastern Division of the American Association of Geographers*, November 20-22, 2005.
90. **Houser, C.** and Hamilton, S., Geomorphological impacts of Hurricane Ivan on Santa Rosa Island, Pensacola, Florida. *Annual General Meeting of the Canadian Association of Geographers*, London, Ontario, May 31 – June 4, 2005.
91. **Houser, C.**, and Hill, P. (2005) Fate of sediment from a proposed dredge disposal site on the Fraser River Delta. *Geological Society of America, Southeastern Division*, March 2005.
92. **Houser, C.** and Greenwood, B. (2003) Multivariate analysis of profile change in a lacustrine multiple barred nearshore. *Annual General Meeting of the Canadian Association of Geographers*, Victoria, British Columbia, May 29 – June 1, 2003.
93. **Houser, C.** (2002) Seasonal dynamics of a lacustrine multiple-barred nearshore, Pinery Provincial Park, Ontario. *Association of American Geographers 98th Annual Meeting*, Los Angeles, California, March 19-23, 2002.
94. **Houser, C.** (2001) The role of antecedent morphology and event sequencing in the morphodynamics of a swash bar. *American Association of Geographers 97th Annual Meeting*, New York City, February 27- March 3, 2001.
95. **Houser, C.** (2000) The importance of event sequencing in nearshore morphodynamics. *Annual General Meeting of the Canadian Association of Geographers*, Brock University, St. Catharines, Ontario, May 31 – June 3, 2000.
96. **Houser, C.** (2000) The emission of PM₁₀ from a clay-crust surface, and the use of shear velocity in emission models. *American Association of Geographers 96th Annual Meeting*, Pittsburgh, Pennsylvania, April 4-8, 2000.
97. **Houser, C.** (1999) Limitations on using shear velocity in dust emission research. *Canadian Association of Geographers Ontario Chapter*, Hamilton, Ontario, October 16, 1999.

Book Reviews

1. **Houser, C.** (2005) *The Coastal Zone: Papers in Honor of H. Jesse Walker*. *Southeastern Geographer*.

Non-refereed Contributions

1. PARASITES AND LOST INSTRUMENTS

2. **Houser, C.**, (2017) Creating sustainable and scalable high impact experiences: Don't forget the faculty. University Affairs.
3. Bishop, M.P., and **Houser, C.** (2016) Geomorphological Mapping and Geospatial Technology. Encyclopedia of Geography.
4. **Houser, C.**, and Ellis, J. (2013) ESEX Commentary: A Tribute to the Influence of Dr. Robin Davidson-Arnott in Coastal and Aeolian Geomorphology. *Earth Surface Processes and Landforms*.
5. **Houser, C.** (2013) *Alongshore variation in nest and false crawl distribution of Loggerhead turtles along St. Joseph Peninsula, Florida*. Report to the University of Florida, 19 pp.
6. Hill, P R; Butler, R W; Elnor, R W; **Houser, C**; Kirwan, M L; Lambert, A; Lintern, D G; Mazzotti, S; Shaw, A; Sutherland, T; Levings, C; Morrison, S; Petersen, S; Solomon, S (2013). Geological Survey of Canada, Open File 7259, 71 pages, doi:10.4095/292672.
7. **Houser, C.** (2012) *Impacts of Oversand Vehicles at Assateague Island National Seashore*. Report to the National Park Services, 163 pp.
8. **Houser, C.** (2011) *Geologic framework assessment for Gulf Islands National Seashore*. Report to the National Park Services, 451 pp.
9. Meyer-Arendt, K.J., **Houser, C.**, and McKinney, N., (2010) *Direct and indirect mortality associated with tropical cyclones*. Report to NOAA, 25 pages.
10. **Houser, C.**, (2009) *Bathymetric Controls on Rip Currents along Perdido Key*. Report to Escambia County, 29 pages.
11. **Houser, C.**, (2009) Barrier Islands. *Encyclopedia of Geography*.
12. **Houser, C.**, (2008) *Role of Cargo Vessels in Salt Marsh Erosion at Fort Pulaski National Monument*. Report to Fort Pulaski National Monument, National Park Service, 38 pages.
13. **Houser, C.**, (2005) *Statistical verification of trends in water quality for selected British Columbia rivers*. Water, Air and Climate Change Branch, Ministry of Water, Land and Air Protection, 51 pages.
14. **Houser, C.**, (2003) *Statistical verification of trends in water quality for selected British Columbia rivers*. Water, Air and Climate Change Branch, Ministry of Water, Land and Air Protection, 57 pages.
15. Nickling, W.G., and **Houser, C.** (1999) *A methodology for the Estimation of vertical PM₁₀ fluxes from dust emission factors for different fugitive dust sources*. EPA contract 68-D70067

WA2-01, 25 pages.

16. **Houser, C.**, and Mason, S. (1995) *Lake Simcoe littoral zone study*. Lake Simcoe Fisheries Assessment Unit, Ontario Ministry of Natural Resources, 1995-3, 67 pages.

TEACHING AND ADVISING

School of the Environment, University of Windsor

Professor: 2016-present

Courses Taught (Enrollment given in parentheses for Fall, Winter and Summer Semesters)

ESCI-3745: Field Methods (F19: 7)

ESCI-8818: Special Topics (F19: 5)

ESCI-4808: Special Topics Geostatistics (W18: 15)

ESCI-4808: Special Topics (S17: 11, S18: 12, S19: 14)- Costa Rica

ESCI-3735: Field Methods in Environmental Science (S17: 11, S18: 12, S19: 14)- Costa Rica

Current Graduate Students at University of Windsor

Jacob Lehner (MSc): *Machine Learning approach to coastal landform identification and modeling*. August 2017-present.

Summer Locknick (MSc): *Correspondence of beach users and the rip hazard at Cavendish Beach, PEI*. August 2018-present

Brent Vlodarchyk (MSc): *Machine learning approach to landslide prediction in Costa Rica*. August 2018-present.

Brianna Lunardi (MSc): *Alongshore correspondence of nearshore, beach and dune morphology*. August 2018-present.

Elizabeth George (MSc): *Post-Dorian beach and dune recovery*. August 2019-present.

Post-doctoral Fellows

Phil Wernette. *Geologic framework controls on beach-dune systems*. August 2017-December 2019.

Alex Smith, *Alongshore variation in beach-dune systems*. June 2019-present.

Laura Chittle, *Program and curriculum development*. May 2020-present.

Department of Geography, Texas A&M University

Assistant and Associate Professor: 2007-2016

Courses Taught (Enrollment given in parentheses for Fall, Winter and Summer Semesters)

GEOG 203: Planet Earth (S10: 23, F10: 170, F11: 300)

GEOG 203-526 Planet Earth: Study Abroad in Costa Rica (W09: 20)- new course

GEOG 205: Environmental Change (W11: 50, W12: 69, F12: 55, W14: 58)- new course

GEOG 205: Environmental Change study abroad (S15: 33)

GEOG 205: Environmental Change online (F15: 154)

GEOG 312: Data Analysis in Geography (F09: 9)- new course

GEOG 331: Geomorphology (F07: 18, F08: 21, F09: 18, F10: 25, F11: 20, W14:37)
 GEOL/GEOG 352: GPS in the Geosciences (W09: 40, F12: 36, W13: 40)- new course
 GEOG 370: Coastal Processes (W08: 21, W12: 55; F14: 52; F15: 50)
 GEOG 450: Field Methods (S12 Study abroad: 15)
 GEOG 489: Environmental Change (F08: 6)- new course
 GEOG 611: Geography Research Design (W08: 9, W09: 15)
 GEOG 666: Coastal Processes (W12: 20; F14: 8).
 GEOG 604: Sedimentary Processes (W13: 9)
 UPAS 181: Science of Surfing (F09: 13)- new course

F07-S14	<i>All Classes</i>	<i>Lower Division</i>	<i>Upper Division</i>	<i>Graduate</i>
Average Evaluation (/5)	4.57	4.71	4.54	4.61

Current and Past Undergraduate Thesis Students

Janelle Randolph: *Beachface sediment sorting in response to storms*, May 2012-May 2013, Texas A&M University.
 Ryan Morales: *Wave attenuation through Seagrass*, September 2012-May 2013. Texas A&M University
 Gemma Barrett: *Sediment transport and morphological change in the swash zone*, September 2008-May 2009, Texas A&M University.

Past Graduate Students at Texas A&M University

Sarah Trimble (PhD): *Morphometric signatures of estuarine and nearshore environments*, 2013-2017.
 Phil Wernette (PhD): *Geologic framework assessment of barrier systems*. 2013- 2017.
 Bradley Weymer (PhD): *Geologic Characterization of Padre Island National Seashore: Linking subsurface geology with remotely sensed imagery*. 2012- 2016 (Co-Chair with R. Giardino in Department of Geology)
 Patrick Barrineau (PhD): *Relating small-scale processes to the geologic framework of the South Texas Sand Sheet*, June 2012-2017
 Peggy Flores (MS) *Nearshore-beach envelope evolution: implications for oil spill detection*. August 2015-2017.
 Elizabeth Renschler (MS): *Post-hurricane vegetation recovery on a barrier island*, 2012-2014.
 Brianna Hammond (MS): *Rates and variability of post-storm dune recovery*, 2013-2015.
 Christy Swann (PhD): *Controls on aeolian sediment transport*, Geography, 2010- 2014. (Co-Chair with D Sherman at University of Alabama).
 Sarah Trimble (MS): *Geologic characterization of backbarrier shorelines*, 2011- 2013.
 Mallorie Jewell (MS): *Development and persistence of blowouts along Padre Island National Seashore*, 2011- 2013.
 Eugene Farrell (PhD, 2012): *Characterizing mass flux profiles in Aeolian saltation*, Geography, Texas A&M University. (Co-Chair with D Sherman at University of Alabama). Postdoctoral Fellow at Rutgers University.
 Gemma Barrett (MS, 2011): *Longshore variation in bar morphology at Pensacola Beach, Florida: Implications for rip current development*. Present Position: Ship Curator for Integrated Ocean Drilling Program (IODP).

Bradley Weymer (MS, 2011): *GPR analysis of beach-dune interface at Padre Island National Seashore*, August 2009-December 2012. (Co-Chair with R. Giardino in Department of Geology). Present Position: PhD Student at TAMU.

Brian Labude (MS, 2012): *Impacts of Oversand Vehicles at Assateague Island National Seashore*.

Daniel Labude (MS, 2012): *Morphodynamics of rip currents at Pensacola Beach, Florida*.

Department of Environmental Sciences, University of West Florida

Assistant Professor, 2004-2007

Courses Taught

GEO1200: Physical Geography (Class and Online Class)

GEO4990/5990: Geostatistics

GEO4991/5991: Surf Science

GEO3210: Geomorphology

GEO4332: Senior Seminar

GEO6118: Research Design

GEO4225/5225: Coastal Morphology

OCP4002: Physical Oceanography (Online Class)

EVR6930: Special Topics: Sediment Transport through Vegetation

EVR6930: Special Topics: Coastal Land Use

Graduate Students

Brooke Saari (MS): *Post-hurricane environmental gradients on a barrier island*, September 2005-May 2007, University of West Florida. Present Position: Okaloosa/Walton County Marine Science Agent, University of Florida, IFAS.

John Oravetz (MS): *LiDAR analysis of Hurricane Katrina impacts within the Mississippi Section of the Gulf Islands National Seashore*, September 2005-May 2007. Present Position: Environmental Consultant: Zev Cohen and Associates.

Kevin Bradley (MS): *Relative velocity of seagrass blades: implications for wave attenuation*, September 2005-May 2007, University of West Florida. Present Position: PhD Student at University of South Florida.

Chasidy Hobbs (MS): *Morphodynamics of a constructed wetland*, September 2005-May 2007, University of West Florida. Present Position: Instructor, UWF.

Department of Geography, University of Victoria

Adjunct Professor, 2003-present

Courses Taught

GEOG 376: Geomorphology I

GEOG476: Geomorphology II

GEOG377: Applied Geomorphology

EOS580: Directed Studies

Undergraduate Thesis Students

Danielle Jmieff: *Sediment transport and morphological change in Witty's Lagoon*,

September 2003-May 2004, University of Victoria.

Graduate Committees

Dilumie Abeysirigunawardena (PhD, 2010): *Impact of climate variability and change on sea level in Coastal B.C.*, Geography, University of Victoria.

Department of Environmental Science, Royal Roads University

Associate Lecturer, June 2003- August 2004

Courses Taught

ES430: Introductory Geomorphology

ES414: Global Processes

PROFESSIONAL SERVICE

Editor-in-Chief

Physical Geography, Taylor & Francis
January 2020- present

Associate Editor

Earth Surface Processes and Landforms
December 2013-December 2018

Special Editor

Earth Surface Processes and Landforms special issue on Coastal and Aeolian Geomorphology in recognition of the career of Dr. Robin Davidson-Arnott

Manuscript Reviews (Since 2007)

Reviewed over 100 articles for 35 different journals since 2007 not including articles reviewed for ESPL as associate editor.

Marine Geology

Geomorphology

Journal of Geophysical Research- Atmospheres

Journal of Geophysical Research- Earth Surface

Journal of Geophysical Research- Oceans

Geophysical Research Letters

Treatise in Geomorphology

Geologica Acta

Journal of Waterway, Port, Coastal and Ocean Engineering

Water Resources Research

Earth Surface Processes and Landforms- now Associate Editor

Aeolian Research

Journal of Coastal Research

Marine Systems

Southeastern Geographer

GeoJournal

Journal of Applied Geography
Journal of Maps
Marine Ecology Progress Series
Singapore Journal of Tropical Geography
Shore and Beach
Sedimentary Geology
Limnology and Oceanography
Natural Resource Modeling
Earth Science Review
Estuarine, Coastal and Shelf Science
Ocean and Coastal Management
Estuaries and Coasts
Journal of Geoscience Education
Landscape Ecology
Physical Geography
State of the Total Environment
Wetlands
Natural Hazards
Canadian Journal of Earth Science
Journal of Geography in Higher Education
Studies in Higher Education
Journal of Sedimentary Research
Journal of Coastal Conservation
Journal of Geography
Journal of Teaching in International Business
Journal of Pedagogy in Higher Education

Book Proposal Review

Chanson, *Tidal Bores*

Proposal Review

National Science Foundation
Natural Science and Engineering Research Council
Georgia National Science Foundation
Council for the Earth and Life sciences, The Netherlands
Exploratory Research Programs, Romania
Canada Foundation for Innovation
National Park Service

NSF Panel Review

EAR REU Panel Review, November 2012
EAR REU Panel Review, December 2018

Textbook Reviews

Brooks/Cole *Essentials of Physical Geography*, 8e, Gabler/Petersen/Trapasso
Freeman *Key Concepts in Geomorphology*, Bierman and Montgomery

Camb. Univ. Press *Introduction to Coastal Process. and Geomorph.*, Davidson-Arnott
Oxford Press *Physical Geography*, Blij (2)
W.H. Freeman Press *Living Physical Geography*, Gervais (Chapter review)
W.H. Freeman Press *Living Physical Geography*, Gervais (Technical review)

Conference Organization

- 2019 *50th Binghamton Geomorphology Conference*
2013 *American Geophysical Union*
Co-Coordinator: *Effective Strategies for Undergraduate Research Experiences I and II*
2012 *American Geophysical Union*
Co-Coordinator: *Coastal Processes and Landforms*
2012 *Geological Society of America*
Co-Coordinator: *Beach-Dune Interaction*
2011 *American Association of Geographers*
Co-Coordinator: *Coastal Geomorphology Sessions in Honor of Robin Davidson-Arnott* (5 sessions with 20 speakers)
2010 *American Association of Geographers*
Co-Coordinator: *Coastal Geomorphology and Management Sessions*
2008 *Geological Society of America*
Technical Session Coordinator: *Trends in Geomorphology*
Technical Session Coordinator: *Coastal and Aeolian Geomorphology*
Kirk Bryan Memorial Field Trip Organizer and Lead
2006 *International Conference on Aeolian Research*
Technical Session Coordinator: *Coastal Aeolian Processes*
2001. *American Association of Geographers*
Organizer and Chair: *Aeolian Processes and Landforms*

External Reviewer for United States Army Corp of Engineers (through Battelle)

February 2011-Present: Mississippi River-Gulf Outlet (MRGO) IEPR

September 2011- March 2012: Barataria Basin (BBBS) IEPR

Listserv Moderator

Geomorph-List moderator, June 2009- present

An email distribution list connecting over 2400 professional and academic geomorphologists around the world for the International Association of Geomorphologists

Professional Memberships

American Geophysical Union

Geological Society of America

Geomorphology and Quaternary Specialty Group

American Association of Geographers

Coastal and Marine Specialty Group of the AAG, Board Member (2008-2010)

Coastal and Marine Specialty Group of the AAG, Treasurer (2010- 2011)

Sigma Xi Research Society

UNIVERSITY AND DEPARTMENTAL SERVICE

Dean, Faculty of Science, University of Windsor

July 2016-present

See Page 1 for full description

Associate Dean for Undergraduate and Faculty Affairs, Texas A&M University

September 2014-June 2016

Please see Page 1 for full description

Global Faculty Ambassador, Texas A&M University

September 2012- June 2016

Please see Page 1 for full description

Undergraduate Director, Department of Geography, Texas A&M University

September 2013-August 2014

Please see Page 1 for full description

Graduate Coordinator, Department of Environmental Studies, University of West Florida

January September 2004-July 2007

Please see Page 1 for full description

GeoX Program, College of Geosciences, Texas A&M University

Faculty Lead (2010-2013), one-week pipeline program to introduce high-achieving high school juniors and seniors to the world of geosciences.

Director (2014), responsible for the program following the departure of Dr. Sonia Garcia, Director of Recruitment

iGEO Program, College of Geosciences, Texas A&M University

Director (2014), responsible for the program following the departure of Dr. Sonia Garcia, Director of Recruitment

NSF REU Site Director: Ecohydrology of a Tropical Montane Cloud Forest

September 2010-May 2014

Please see Page 1 for full description

University Honor Council, Member

September 2011-August 2014

Investigator (6) and Disciplinary Panel Member (5)

Faculty Advisor

Geosciences Student Association Faculty Advisor (2007-2010)

Aggies for Global Education (2013)

- Student-led program to bring engineering and science to middle and high school students in Costa Rica through the Soltis Center for Research and

Education

Committees

University

Academic Operations Committee (AOC, TAMU)
QEP Advisory Council, Office of the Provost (TAMU)
IA3 Committee, Office of the Provost (TAMU)
SACSCOC, Office of the Provost (TAMU)
University Academic Appeals Committee (TAMU)
University Curriculum Committee, Faculty Senate (TAMU)
International Budget Committee, Office of the Provost (TAMU)
Vice Provost Leadership Team, Office of the Provost (TAMU)
Classroom Task Force, Office of the Provost (TAMU)
Texas A&M University Diversity Scholarship Committee, Reviewer (TAMU)
Marine Services Committee, Member (UWF)

College

Academic advisor II Search Committee, Chair (TAMU)
Undergraduate Curriculum Committee (TAMU)
Director of Recruitment, Selection Committee, Member (TAMU)
iGEO Selection Committee, Member (TAMU)
GEOX Selection Committee, Member (TAMU)
Aggieland Saturday Committee, Member (TAMU)
College of Geosciences Soltis Center Task Force, Lead (TAMU)
TAMU, USP, UFPE Coordination, Team Lead (TAMU)
College of Geosciences Scholarship Committee, Member (TAMU)
College Safety Committee, Member (TAMU)
College of Geosciences Dean Search Committee, Member (TAMU)
Head of Geology and Geophysics Search Committee, Member (TAMU)
Geology and Geophysics Sed./Strat. Search Committee, Member (TAMU)

Department

Geography Undergraduate Committee, Director (TAMU)
Senior and Junior GIS Search Committees, Member (TAMU)
Ad-Hoc Tenure and Promotion Guidelines Committee, Member (TAMU)
Ad-Hoc Strategic Plan for Research Committee for Geography, Member (TAMU)
Faculty Hiring Committees (Hydrogeology and Phys. Geog.), Member (UWF)

Gulf Coast Cooperative Ecosystems Studies Unit

Successfully applied for UWF membership in CESU, 2006
University Coordinator, 2006-2007

Office of Undergraduate Research

Panel on Undergraduate Research, September 2011

OUTREACH

National Rip Current Messaging Team
National Oceanographic and Atmospheric Administration
June 2015-present

Invited Keynote Talks

Study abroad benefits the faculty, Association of Texas Graduate Schools Banquet,
September 24, 2015.
Outreach and Engagement in Research, Student Research Week, Texas A&M University
April 4, 2016
Authentic Outreach and Engagement, Graduate Studies and Research Recognition
Banquet, Texas A&M University- Central Texas, April 29, 2016

Invited Lectures/Presentations

Rip current hazard in the Maritimes, Various Locations in NB, PEI, June 2018
Authentic Engagement and Outreach, University of Windsor, April 2016
Pathways to the Geosciences, University of North Carolina System, Jan. 2016
Importance of Framework Geology to the Texas Coast, Baylor University, Jan. 2016
Impacts of Driving on the Beach, Texas Beach and Dune Forum, September 2015
Scales of barrier island resiliency, North Carolina Dune Forum, October 2015
Barrier island recovery, University of West of Florida, September 2014
Study abroad and research opportunities in the College of Geosciences, Jan. 2013
Study abroad and research opportunities in the College of Geosciences, Nov. 2013
Competing initiatives at the Soltis Center, Landscape Architecture, February 2014
Nearshore, beach and dune interaction, University of Puerto Rico, November 2013
Barrier Island Management, TAMU ABS IGERT, April 2013
Beach-Dune Recovery, TAMU Civil Engineering, March 2013
Ecohydrology of a Cloud Forest, Geology, University of Costa Rica, July 2012
Rip Current Hazard in Northwest Florida, TAMU Geography, September 2010
Rip Currents at Pensacola Beach, University of West Florida, March 2010
Barrier Island Response and Recovery, TAMU Geology, January 2010
Bed elevation changes in the swash zone, TAMU Oceanography, October 2008
Boat versus wind waves in bank erosion, Georgia Ports Authority, September 2008
Hurricane Impact and Recovery, Leisure Learning Society, November 2006
Geologic Controls on Road Damage, National Park Service, October 2006
Geologic Controls on Island Geomorphology, National Park Service, September 2006
Response and Recovery of Santa Rosa Island, Florida State University, June 2006
Dune response and recovery to hurricanes, AWMA, May 2006
Impact of Hurricane Ivan on Santa Rosa Island, Democratic Women Voters, April 2006

Local Environmental Issues

Dredging and spoil placement: Pensacola Pass, National Park Service, September 2006
Post-hurricane designs for County Road 399, National Park Service, October 2006
Gulf Islands National Seashore Scoping Summary, National Park Service, Ongoing

Media Presentations

CBC Radio

Rip Current Hazard in the Great Lakes and in the Maritimes (June 2018)
 Multiple shows about programs in Faculty of Science

Weather Channel
 Rip Currents, Driving on the Beach, Diving (August 2014)

National Public Radio
 Post-Sandy dune recovery (December 2012)

Scientific American
 The Science behind Superstorm Sandy's Crippling Storm Surge (November 2012)
<http://www.scientificamerican.com/article.cfm?id=how-to-protect-new-york-city-from-storm-surges>

Texas Sea Grant Monthly
 Description of the rip current perception study

Science and the Sea
 2 radio programs on rip currents related to rip current research

Pensacola News Journal
 Fort Pickens Road: Crossroads, January 2007 (Lead Story)
 Lonely Road to Recovery, November 2006
 Erosion will get Worse, March 2006 (Lead Story)

WEAR-TV
 Coastal erosion on Santa Rosa Island, March 2006

WUWF, National Public Radio
 Cold front erosion versus Hurricane erosion, March 2006

WUWF-TV
 Tsunamis and potential for the Gulf of Mexico, Inside UWF, January 2005
 Coastal erosion along Santa Rosa Island, Being Green, January 2006
 Project Greenshores, Inside UWF, January 2007
 Impact of roads on dune recovery, Being Green, February 2007

University and College Media
 Division of Marketing & Communications
 High Impact Learning Experiences Abroad, September 2011
 Texas A&M University, Foundation of Former Students
 Pura Vida and Gig Em', November 2014.

Popular Media
 University Affairs
 How to get students to commit to high-impact learning (June 2018)
 Study abroad experiences are not just for students (June 2017)

The Conversation
 Why your tourist brain may try to drown you (March 2019)
 15,067 reads and promotion by The Weather Network