



DR. KIERSTEN (KIKI; RUNYAN) PATSCH  
ASSOCIATE PROFESSOR  
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Environmental Science and Resource Management  
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## RESEARCH INTERESTS and EXPERTISE

- Coastal Geologic Hazards
    - Seacliff and bluff erosion
    - Short-term and long-term changes in sandy beach geomorphology
    - Reductions to natural sand supply
    - Spatiotemporal geomorphic mapping with unmanned aerial vehicles (UAVs/Drones)
  - Climate Change and the Impact on Coastal Geologic Systems
  - Coastal Policy, Management, and Resilience
  - Sediment Budget Analysis of Littoral Systems
  - Sand as a resource/ Illegal sand mining/ Opportunistic beach nourishment
  - Coastal Access Equity
  - Interdisciplinary approaches to monitoring and managing coastal systems
  - Science Communication including multi-media approaches
  - Geographical Information Science (GIS)
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## EDUCATION

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| Ph.D. | Earth Sciences, University of California Santa Cruz   | 2000-2004 |
|       | Advisor: Dr. Gary Griggs  |           |
|       | Dissertation: <i>An Analysis of Littoral Cell Sand Budgets in California</i>                      |           |
| B.A.  | Environmental Sciences, University of Virginia, Charlottesville, Virginia                         | 1996-2000 |
|       | High Distinction  |           |
|       | Thesis Advisor: Dr. Robert Dolan  |           |
|       | Honors Thesis: <i>Origin of a Dune Called Jockey's Ridge on the Outer Banks of North Carolina</i> |           |
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## PROFESSIONAL ACTIVITIES and EXPERIENCE

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| ASSOCIATE PROFESSOR   | 2021-PRESENT |
| ▪ <u>California State University Channel Islands</u><br>Environmental Science and Resource Management (ESRM)<br>Dr. Sean Anderson (Chair)   |              |
| ASSISTANT PROFESSOR   | 2015-2021    |
| ▪ <u>California State University Channel Islands</u><br>Environmental Science and Resource Management (ESRM)<br>Dr. Sean Anderson (Chair)<br>*Served as Interim ESRM Chair from 2019-2020 |              |

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## ADJUNCT PROFESSOR/LECTURER

2013-2015

- James Madison University  
Geology Department  
Contact: Dr. Steven Leslie (Chair)
- Lynchburg College  
Environmental Studies Department  
Contact: Dr. David Perault (Chair)

## RESEARCH ASSOCIATE

2008-2012

- University of Virginia/UNC Chapel Hill  
Contact: Dr. Laura Moore
  - Academic paper preparation
  - Utilized a MATLAB based model (GEOMBEST) to simulate the evolution of coastal geomorphology and stratigraphy, resulting from changes in sea level and sediment volume, to develop a late-Holocene simulation that evolves North Chandeleur Island (off the coast of Louisiana) to historical states
  - Explored the potential future evolution of the island through forward simulation to determine future habitat conditions for the snowy plover
- Randolph-Macon College  
Contact: Dr. Michael Fenster
  - Post processed side-scan sonar data for the barrier islands of Virginia using SonarWiz.
  - Edited consultant reports on beach erosion hazards

## RESEARCH CONSULTANT

2005-2008

- PFC Energy: Global Energy 2007-2008
  - Assisted in gathering data for the North American Petroleum Database
  - Developed assessments of oil, gas, and coal bed methane data in the US in addition to creating a GIS of the data and PowerPoint presentations
- U.S. Army Corps of Engineers: 2006-2007  
Coastal Hydraulic and Engineering Laboratory
  - Researched the breaching processes of barrier beaches on the coast of northern California, for which a new breaching susceptibility index was introduced
  - Reviewed case studies for Carmel River Lagoon, Lake Earl, Redwood Creek, Russian River Estuary, and Stone Lagoon
- University of Virginia: 2005-2006  
Contact: (Dr. Robert Dolan) Dr. Patricia Wiberg
  - Assisted in gathering research, writing, and editing a book concerning sinking cities around the world

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## POST-DOCTORAL RESEARCHER

2005

- Division of Boating and Waterways: Santa Cruz, CA  
Contact: Dr. Gary Griggs  
-Development of Sand Budgets for California's Major Littoral Cells: Eureka, Santa Cruz, Southern Monterey Bay, Santa Monica (including Zuma), San Pedro, Laguna, Oceanside, Mission Bay, and Silver Strand Littoral Cells  
-Continuation of the comprehensive study and update of regional littoral cell boundaries and sand budgets with an emphasis on reductions to sediment supply through the damming of rivers and the armoring of seacliffs.

## GRADUATE RESEARCHER

2000-2004

### UNIVERSITY OF CALIFORNIA SANTA CRUZ

- Division of Boating and Waterways 2004  
*Littoral Cells and Sand Budgets along the Coast of California.*  
Comprehensive study and update of regional littoral cell sediment budgets with an emphasis on reductions to sediment supply through the damming of rivers and the armoring of sea cliffs. \$60,228 research grant (1 yr.). PI: Dr. Gary Griggs
- US Army Corps of Engineers Coastal Inlet Research Program 2001-2003  
*Littoral Cells, Littoral Drift, and Sand Budgets along the Coasts of California.* Development of sand budgets for the majority of the coast of California using harbor dredging as a proxy for littoral drift. Harbor placement was analyzed regionally in reference to littoral cells and drift in California. \$78,000 research grant (2yrs). PI: Dr. Gary Griggs
- California Coastal Conservancy 2000-2001  
*Increasing Natural Sand Supply to California's Beaches. Contributions of Coastal Cliff Erosion to the Beach Sand Budget in California and the Effects of Armoring.* Examination of sand contribution from sea cliff erosion in the Santa Barbara and Oceanside littoral Cells, and the reduction of sand supply due to coastal armoring
- US Geological Survey 2000-2001  
*Report to the Nation, Status and Trends of Seacliffs, California.*  
-Participated in a statewide assessment of seacliffs along California's coastline.  
-Inventoried into a GIS environment shoreline attributes such as erosion rates, cliff geology, erosion hazard or hotspot areas, and development along the coastal zone of California.

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## WORKSHOPS AND TRAINING

- Faculty Success Program 2021  
This is a 12-week program designed to help tenure-track and tenured faculty with the skills necessary to increase research and writing productivity while maintaining a healthy work-life balance. It includes individual coaching sessions, weekly training, accountability calls, time tracking, and a supportive community.
- Community Based Research (CBR) Faculty Fellow Program 2020-2021  
California State University Channel Islands. This faculty development program is the culmination of years of efforts at the Center for Community Engagement at CI to raise the profile and increase the practice of CBR on the campus.
- Advanced Modelling with XBeach-Nonhydrostatic 2019  
This course focuses on the modeling of sandy, gravel, and vegetated coasts with XBeach-NH+, the new non-hydrostatic, wave-resolving mode of XBeach. Workshop held in conjunction with Coastal Sediment 2019 in Tampa, Florida. May 27<sup>th</sup>, 2019.
- Coastlines and People (CoPe) Workshop 2018  
Under a grant from the National Science Foundation, the University Cooperation for Atmospheric Research (UCAR) is looking to better understand the research needs related to advancing understanding of the impacts of coastal environmental variability and natural hazards on populated coastal regions. NSF Geosciences Directorate supports this activity through award # [1844215](#). Selected participants attend workshops in San Diego, Chicago, and Atlanta September 26-28, 2018. Selected Participant <https://coastlinesandpeople.org/>
- Coastal Zone Foundation's Coastal Ecology Short Course 2017  
Held in conjunction with the American Shore & Beach Preservation Association's National Coastal Conference: Beaches, Bays, and Beyond.  
Fort Lauderdale, Florida October 24-26, 2017  
4 Professional Development Hours.
- Coastal Zone Foundation's Coastal Policy Short Course 2017  
Held in conjunction with the American Shore & Beach Preservation Association's National Coastal Conference: Beaches, Bays, and Beyond.  
Fort Lauderdale, Florida October 24-26, 2017  
4 Professional Development Hours.
- Introduction to R Spatial Analysis 2017  
Introduction to the R program and learn basic spatial functions commonly used with GIS software. Time & Date: 8:30 am – 12:00 pm on Monday May 22, 2017 Instructor: Shannon Albeke is a Research Scientist and Ecoinformaticist at the Wyoming Geographic Information Science Center at the University of Wyoming. UC GIS Annual Conference, Washington D.C.
- Advanced Spatial Analysis Topics using R 2017  
Using R and OSGeo\$W to create automated workflow that integrates cloud-based raster/satellite data acquisition/processing with the extraction of this data to either points or polygons to facilitate the modeling of a landscape process. Time & date: 1:00pm – 5 pm on Monday May 22, 2017. Instructor: Shannon Albeke is a Research Scientist and Ecoinformaticist at the Wyoming Geographic Information Science Center at the University of Wyoming. UC GIS Annual Conference, Washington D.C.

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- [Beach Sustainability Workshop](#), Organizer and facilitator 2017  
Funded by COAST with Dr. Philip King, SFSU. A two-day workshop with CSU and UC academics, NGOs, as well as state and federal agencies to form a working group to develop the Beach Sustainability Project and Beach Sustainability Index.
  - [Drone2Map and Arc Collector Workshops](#) 2016  
Workshops held at the 2016 ESRI User Conference in San Diego, California to train educators to use and teach Drone to Map and Arc Collector in college-level courses.
  - [Pix4D User Workshop](#) 2016  
Face-to-face workshop for guided instruction on Pix4D software to develop 2D and 3D images and models from UAV-derived images
  - [Coastal Zone Foundation's Coastal Geology short course](#) 2016  
Held at the American Shore & Beach Preservation Association's National Technical Conference held in Washington DC on February 25, 2016 and provided 4 Professional Development Hours.
  - [Coastal Inlets Research Program Technology-Transfer Workshop](#) 2003  
Thirteen professional development hours for attending the 2003 workshop held February 10-12 in Pointe Verda Beach, Fl. Concentration on shoreline modeling using GenesisT and other models developed by the Army Corps of Engineers
  - [USGS: Status and Trends of Seacliffs in the United States- Workshop](#) 2002  
Workshop held January 9-11, 2002 in Santa Cruz, California for all of the regional authors participating in the USGS Report to the Nation on the status of seacliffs
  - [National Conference on Beach Preservation: Technology-Transfer Workshop](#) 2002  
Thirteen professional development hours for attending the 2002 workshop held January 23-25, 2002 in Biloxi, Mississippi. Concentration on GIS development for shoreline processes

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## TEACHING EXPERIENCE

- California State University Channel Islands, Camarillo, CA  
ESRM 100: Introduction to Environmental Science  
ESRM 210: Physical Oceanography & Lab  
ESRM 328: Introduction to Geographic Information Systems (GIS) & Lab  
ESRM 335: The Beach, Upper Division Interdisciplinary General Education (UDIGE) course  
ESRM 428: Intermediate Geographic Information Systems (GIS) & Lab  
ESRM 371: Coastal Monitoring with Remotely Piloted Systems & Lab  
ESRM 494: Independent Research  
COMP 490: Computational Beauty and the Beach & Lab  
Coastal Geomorphology, Osher Lifelong Learning Institute
- James Madison University, Harrisonburg VA  
GSCI 100: The Physics and Chemistry of the Human Experience  
GSCI 104: Scientific Principles- Coastal Processes and Hazards Laboratory
- Lynchburg College, Lynchburg, VA  
ENVS 333: Physical Oceanography & Lab (4 day field trip to the Outer Banks of North Carolina)
- University of California Santa Cruz, Santa Cruz, CA  
Physical Oceanography & Lab (Teaching Assistant)  
Marine Policy (Writing Assistant/Tutor)  
Mentor for Senior Thesis Research  
Coastal Geology & Lab (Guest Lecturer and Teaching Assistant)

## COMPUTER/TECHNICAL SKILLS

- Geographical Information Systems (ArcMap; ArcPro; ArcGIS Online, ArcCollector; Survey123; ArcCatalog; Drone2Map)
- Pix4D, DJI GO4, Drone Deploy, Cloud Compare, LP360
- MapSmart
- GEOMBEST (Geomorphic Model of Barrier, Estuarine, and Shoreface Translations), MATLAB based quantitative simulation of large-scale coastal behavior
- SonarWiz
- USACOE Sediment Budget Analysis System (SBAS)

## PROFESSIONAL ASSOCIATIONS AND MEMBERSHIP

AAG GeoMentor  
American Shore & Beach Preservation Association (ASBPA)  
American Geophysical Union (AGU)  
California Shore & Beach Preservation Association (CSBPA)  
Coastal Education and Research Foundation (CERF)  
CSU GIS Specialty Center, Board Member  
University Consortium for Geographic Information Science

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## AWARDS

**Kiki Patsch** (2019). President's Award for Innovations in Teaching and Learning. California State University Channel Islands.

**Kiki Patsch** (2019). Top 5 Finalist, Maximum Faculty Teaching Award, Student Government and Selection Committee, California State University Channel Islands.

## PROFESSIONAL CONTRIBUTIONS

### PROFESSIONAL PEER-REVIEWED JOURNAL ARTICLES **IN PREPARATION**

Anderson, Ryan, and **Patsch, K.** (In preparation). The Unstable Edge: Conservation, coastal erosion, and sea level rise in Cabo Pulmo National Park, BCS, Mexico. *Journal of Coastal Research*.

Reineman, D and **Patsch, K.** (In preparation). The future of coastal access in California and its implications for environmental justice. *Marine Policy*.

### PROFESSIONAL PEER-REVIEWED JOURNAL ARTICLES **ACCEPTED WITH REVISIONS**

**Patsch, K.,** Jenkins, S. and King, P. (2022). All According to Plan: Maldevelopment, Moral Hazard, Federal Aid, and Climate Change Adaptation on Dauphin Island, Alabama, U.S.A. *Ocean and Coastal Management*. (In Review)

### PROFESSIONAL PEER-REVIEWED JOURNAL ARTICLES **IN PRESS**

Lester, Charles, Griggs, Gary, **Patsch, Kiki,** and Anderson, Ryan. Shoreline Retreat in California: Taking a Step Back. *Journal of Coastal Research* (In Press).

Anderson, Stacey and **Patsch, Kiki.** (2022). Coastal Communication: Enhancing Scientific Literacy and Discourse in English and Environmental Science and Resource Management. Communicating Science special issue of *The Journal of the Assembly for Expanded Perspectives on Learning* (In Press).

### PROFESSIONAL PEER-REVIEWED JOURNAL ARTICLES **PUBLISHED**

**Patsch, K.,** and Griggs, G. (2021). California harbor dredging: History and trends. *Shore & Beach*. Vol. 89(3), pp. 13-25. [LINK](#)

**Patsch, K.,** King, P, Gaston, E., Reineman, D., Steele, C., Jenkins, S., Anderson, S. (2021). Development of a Beach Sustainability Assessment: Rapidly Monitoring and Evaluating the Condition of California's Sandy Beaches. *Journal of Coastal Research*. Vol. 37(6), pp 1130-1157. [LINK](#)

**Patsch, K.,** Hartley, C., and Gaston, E. (2021). Reading a Bird's Mind: Insights from small and micro scale mapping to better understand and predict nest selection. *CSU Geospatial Review: Geographical Information Science in the California State University System*. Vol. 18, Summer 2021, pp. 2-3. [LINK](#)

Anderson, R., **Patsch, Kiki,** Lester, C., and Griggs, G. (2020). Adapting to Long-term Sea Level Rise: Managed Relocation- Stepping back from the Edge. *Shore & Beach*. Vol. 88(4), pp. 1-21. [LINK](#)

Griggs, G., **Patsch, K.,** Lester, C., Anderson, R. (2020). Groins, Sand Retention, and the Future of Southern California Beaches. *Shore & Beach*. Vol. 88(2), pp. 1-23. [LINK](#) [DOI](#)

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- Anderson, Stacey Stanfield, **Patsch, Kiki**, and Baker, Raquel. (2020) [Eroding the Future: Telling the Story of Sand Mining, Climate Change, and Environmental Justice in Coastal South Africa. \*Enculturation: a Journal of Rhetoric, Writing, and Culture, Special Issue: Rhetorics and Literacies of Climate Change\*. Vol. 32. \[LINK\]\(#\)](#)
- Anderson S., Castillo, H., **Patsch, K.** (2020). Arts under the Stars: Integrated Collaboration of Performing Arts, Environmental Science and Resource Management, and English. *Impact: The Journal of the Center for Interdisciplinary Teaching and Learning*. Boston University Center for Interdisciplinary Teaching and Learning. Vol. 9(2), summer 2020, pp. 17-34. [LINK](#)
- Griggs, G., and **Patsch, K.** (2019). The Protection/Hardening of California's Coast: Times Are Changing. *Journal of Coastal Research*. Vol 35(5). pp. 1051-1061. [LINK](#)
- Griggs, G.B. and **Patsch, K.** (2019). California's Coastal Development, Sea-Level Rise & Extreme Events: Where do we go from here? *Shore & Beach*. Vol 87(2). pp. 1-14. [LINK](#)
- Patsch, K.**, and DeSilva, J. (2019). Determining the Efficacy of Solar Panels on Campus Rooftops using GIS, UAVs, and Area Solar Radiation Models. *CSU Geospatial Review: Geographic Information Science in the California State University System*. Vol. 15, Spring 2019. [LINK](#)
- Patsch, K.**, Wells, M, Monak, M. (2019). Communicating Geospatial Science with Story Maps. *CSU Geospatial Review: Geographic Information Science in the California State University System*. Vol. 15, Spring 2019. [LINK](#)
- Griggs, G.B., **Patsch, K.** (2018). Natural changes and human impacts on the sand budgets and beach widths of the Zuma and Santa Monica littoral cells, southern California. *Shore & Beach*, 86(1), 3-16. [LINK](#)
- Patsch, K.**, Coty, A., and Costa, P. (2017). Establishing Sea Cliff Erosion Rates and Identifying Erosional Hotspots for Becher's Bay, Santa Rosa Islands. *CSU Geospatial Review: Geographic Information Science in the California State University System*. Vol. 14, Spring 2017, pp 1; 6-7. [LINK](#)
- Moore, L.J., **Patsch, K.**, Williams, S.J., and List, J.L. (2014). The potential for sea-level-rise-induced barrier island loss: Insights from the Chandeleur Islands, Louisiana, USA. *Marine Geology*, 355, 244-259.
- Moore, L. J., J. H. List, S. J. Williams, and **K. Patsch**. (2011). Barriers on the brink: the complex intertwined roles of geologic framework, sediment availability and sea-level rise in island evolution. In: *Coastal Sediments 2011*, edited by P. Wang, J. D. Rosati and T. M. Roberts, pp. 272-285, World Scientific, Miami, FL, USA.
- Moore, L.J. List, J.H., **Patsch, K.**, and Williams, S.J. (2009). Barrier island sensitivity to sea-level rise: Insights from numerical model experiments, North Carolina Outer Banks and Chandeleur Islands, LA, USA. *EOS Transactions. AGU*, 9(22), Fall Meet. Suppl., Abstract U51A-0012.
- Patsch, K. B.**, & Griggs, G. B. (2008). Development of a Sediment Budget for the Santa Barbara Littoral Cell. *Marine Geology*, 252(1-2), 50-61.



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- Kraus, N. C., **Patsch, K. B.**, & Munger, S. (2008). Barrier Beach Breaching from the Lagoon Side with Reference to Northern California. *Shore & Beach*, 76(2), 33-43.
- Limber, P. W., **Patsch, K. B.**, & Griggs, G. B. (2008). Coastal Sediment Budgets and the Littoral Cut-off Diameter: A Grain Size Threshold for Quantifying Active Sediment Inputs. *Journal of Coastal Research Special Issue*, 24(2), 122-133.
- Runyan, K. B.**, & Griggs, G. B. (2003). The Effects of Armoring Seacliffs on the Natural Sand Supply to the beaches of California. *Journal of Coastal Research* 19(2), 336-347.
- Runyan, K. B.**, & Griggs, G. B. (2003). Implications of Harbor Dredging for the Santa Barbara Littoral Cell. *Proceedings from the California and the World Ocean Conference 2002*, Santa Barbara, California.
- Griggs, G. B., & **Patsch, K. B.** (2004). Cliff Erosion and Bluff Retreat along the California Coast. *Sea Technology*, 45(9), 36-40.
- Griggs, G. B., & **Runyan, K. B.** (2004). Cliff Erosion and Bluff Retreat along the California Coast. *Proceedings from the Oceans 2003 Marine Technology and Ocean Science Conference*.
- Runyan, K. B.**, & Dolan, R. (2001). Origin of Jockey's Ridge, North Carolina: End of the Highest Sand Dune on the Atlantic Coast? *Shore & Beach*, 69(3).

#### BOOKS AND BOOK REVIEWS FOR ACADEMIC JOURNALS

- Anderson, Stacey and **Patsch, Kiki**. (Accepted). Coastal Communication: Enhancing Scientific Literacy and Discourse in English and Environmental Science
- Patsch, K.** (2018). A Review of Coasts in Crisis: A Global Challenge. *Coastal Management*. Vol. 46(2). pp. 1-3. DOI 10.1080/08920753.2018.1426378.
- Griggs, G. B., **Patsch, K. B.**, & Savoy, L. (2005). *Living with the Changing California Coast*. Berkeley, California: University of California Press. 540pp

#### MULTIMEDIA SCHOLARSHIP

- Castillo, H., **Patsch, K.**, Anderson, S. (2019). CSU Channel Islands Performing Arts, English, Political Science, and Environmental Science and Resource Management Programs Perform a Climate Awareness Dance for the Ten Strands/UC-CSU Climate Literacy Summit December 11, 2019. [LINK](#)
- Patsch, K.**, Sanchez Ramirez, R., and Woods, T. (2019) Coastal Armoring in California. <https://arcg.is/0DTely>
- Patsch, K.** and Anderson, Stacey. (2019). *Save Our Sand*. Dance Performance/Website Arts under the Stars Collaboration with ESRM 335 The Beach, English 331, and Performing Arts. California State University Channel Islands. May 3<sup>th</sup> and 4<sup>th</sup>, 2019. <https://youtu.be/nrRF19oqy9s> and <http://arcg.is/18G04q>

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**Patsch, K.** and Anderson, Stacey. (2018). *Obituary to the Beach*. Dance Performance/Website Arts under the Stars. California State University Channel Islands. May 4<sup>th</sup> and 5<sup>th</sup>, 2018. [LINK](http://beachesontheedge.sandshed.org/arts-under-the-stars/)

**Patsch, K.** and Anderson, Stacey. (2017). *Beaches on the Edge*. California State University Channel Islands. <http://beachesontheedge.sandshed.org/>

#### TECHNICAL REPORTS

King, P., **Patsch, K.**, Jenkins, S. (2022). Technical memorandum for Southern Environmental Law Center regarding the U.S. Army Corps of Engineers Charleston Peninsula Storm Surge Project Economics Analysis. Submitted July 29<sup>th</sup>, 2022. [LINK](#)

Anderson, R., Blalock, J., Ellis, J., Lester, C., and **Patsch, K.** (2018). *CoPe Nodes: Enhancing Coastal Resilience through Community-Driven Research and Education*. National Science Foundation University Cooperation for Atmospheric Research White Paper. Coastlines and People (CoPe) Scoping Sessions, San Diego, California, September 28, 2018.

**Patsch, K. B.**, & Griggs, G. B. (2007). *Development of Sand Budgets for California's Major Littoral Cells: Eureka, Santa Cruz, Southern Monterey Bay, Santa Barbara, Santa Monica (including Zuma), San Pedro, Laguna, Oceanside, Mission Bay, and Silver Strand Littoral Cells*. Oakland, California: Report to the California Coastal Sediment Management Work Group, California Department of Boating and Waterways.

**Patsch, K. B.**, & Griggs, G. B. (2006). *Littoral Cells, Sand Budgets, and Beaches: Understanding California's Shoreline*. Oakland, California: California Sediment Management Group.  
<http://www.dbw.ca.gov/CSMW/PDF/LittoralDrift.pdf>

Griggs, G. B., & **Patsch, K. B.** (2004). *California's Coastal Cliffs and Bluffs: Formation, Evolution, and Stability of Coastal Cliffs Status and Trends*: United States Geological Survey Professional Paper Number 1693. 123pp.

**Runyan, K. B.**, & Griggs, G. B. (2003). *CIRP Web Database: Net/Gross Longshore Transport Rates, California*. Vicksburg, Mississippi: Army Engineer Research and Development Center.

**Runyan, K. B.**, & Griggs, G. B. (2002). Chapter 8: Contributions from Coastal Cliff Erosion to the Littoral Budget. In M. Coyne & K. Sterrett (Eds.), *California Beach Restoration Study* (pp. 8.1-8.5). Sacramento, California: California Division of Boating and Waterways and the State Coastal Conservancy.

#### THESES

**Patsch, K. B.** (2004). *An Analysis of Littoral Cell Sand Budgets for California*. Unpublished Ph.D. Dissertation, University of California, Santa Cruz, Santa Cruz.

**Runyan, K. B.** (2000). *A Dune Called Jockey's Ridge*. Unpublished Undergraduate Honor's Thesis, University of Virginia, Charlottesville, Virginia.

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## CONFERENCE ABSTRACTS, TALKS & POSTERS

- Patsch, K.** and Reineman, D. *Coastal Access Equity with Rising Seas in California: A case study*. American Shore and Beach Preservation Association. Long Beach, California. September 13-16, 2022. Abstract Accepted.
- Beyeler, M., **Patsch, K.**, George, D., and Sadrpour, N. *BEACON's Science Advisory Committee (SAC): Increasing the Alignment of Actionable Science and Policy*. American Shore and Beach Preservation Association. Long Beach, California. September 13-16, 2022. Abstract Accepted.
- Beyeler, M., **Patsch, K.**, Merrill, N., Sadrpour, N. *Climate, Health, Equity and the Beach*. American Shore and Beach Preservation Association. Long Beach, California. September 13-16, 2022. Abstract Accepted.
- Beyeler, M., George, D., **Patsch, K.**, and Sadrpour, N. *Shining a Light on Collaborative Science: The BEACON Approach*. Virtual Presentation to: California Social Coast Forum. March 10, 2022.
- Beyeler, M., **Patsch, K.**, Reineman, D., Merrill, N. and Eger, E.. *Proposed Panel Discussion: The Future of Coastal Access: Lessons learned from southern California*. American Shore and Beach Preservation Association. Long Beach, California. September 13-16, 2022. Panel Accepted.
- Patsch, K.**, Chin, A., O'Hirok, L., Gomez, M. (2020). Ring Debris Flow Prevention Nets, Effective Mitigation or Overkill: Comparison of Wildfire Impacts and Debris Flows in Colorado Springs, Colorado and Montecito, California. American Association of Geographers. Annual Conference. April 7-11, 2020. Abstract accepted. Conference cancelled due to COVID-19.
- Patsch, K.** (2019). The Hardening of California's Coast in the Face of Sea-level Rise. *American Shore and Beach Preservation Association National Coastal Conference*. Myrtle Beach, SC. October 2019 (abstract accepted). Declined due to state travel restrictions to SC
- Patsch, K.** and Reineman, D. (2019). California's Coastal Access Equity and Environmental Change. *American Shore and Beach Preservation Association National Coastal Conference*. Myrtle Beach, SC. October 2019 (abstract accepted). Declined due to state travel restrictions to SC
- Patsch, K.**, King, P., and Anderson, S. (2019). The Beach Sustainability Assessment: Evaluating the Condition of California's Beaches. *American Shore and Beach Preservation Association National Coastal Conference*. Myrtle Beach, SC. October 2019 (abstract accepted). Declined due to state travel restrictions to SC
- Patsch, K.** and Hartley, C. (2018). Making environmental community connections through GIS-based service learning. *ESRI Educator's Conference*. San Diego, California, July 7, 2018. (Speaker)
- Patsch, K.** and King, P. (2017). The Development of Beach Sustainability Indices to Assess and Monitor the Value of Sandy Beach Ecosystems in the Santa Barbara, California Littoral Cell. *2017 American Shore & Beach Preservation Association (ASBPA) National Coastal Conference: Beaches, Bays & Beyond*. Fort Lauderdale, Florida, October 24-26, 2017. (Speaker)
- Moore, L., List, J., Williams, S.J., and **Patsch, K.** (2011). Barriers on the Brink? The Complex Intertwined Roles of Geologic Framework, Sediment Availability, and Sea-level Rise in Island Evolution. *The Proceedings of the Coastal Sediments Conference*. Miami, Florida, USA, May, 2011.
- Griggs, G.B., **Runyan, K.B.**, Willis, C. (2003). Challenges to Understanding Littoral Sand Budgets along Active Margin, High Energy Coastlines. *GSA Conference 2003-Session: Coastal Processes and Hazards along Active Margin and Low Latitude Coasts*. Seattle, Washington, November 2003. (Speaker)

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Griggs, G.B. and **Runyan, K.B.** (2003). Cliff Erosion and Bluff Retreat along the California Coast. *Oceans 2003 Marine Science and Ocean Technology Conference*. San Diego, California, September 2003. (Speaker)

**Runyan, K.B.** (2002). Implications of Harbor Dredging for the Santa Barbara Littoral Cell. *California and the World Ocean '02*. Santa Barbara, California, October 2002. (Speaker)

**Runyan, K.B.** (2002). Harbor Dredging, Littoral Cells, and Littoral Drift: Comprehensive Sediment Budgets for California. *Coastal Inlet Research Program (CIRP) Conference*, Vicksburg, Mississippi, June 2002. (Speaker)

**Runyan, K. B.** (2001). Contributions of Coastal Cliff Erosion to the Beach Sand Budget in California and the Effects of Armoring. *Restoring the Beach: Science, Policy, and Funding- CSBPA and SoCalCoast 2001 Annual Conference*, La Jolla, CA, Scripps Institute of Oceanography. (Speaker)

## INVITED SPEAKER AND/OR PANELIST

### ACADEMIC CONFERENCES AND PROFESSIONAL MEETINGS

**Patsch, K.** and Reineman (2021). Beach Sustainability Assessment: Comprehensive Analysis for Management (BSA-CAMP) Project. [CSU COAST 2021 Virtual Annual Meeting](#). November 5, 2021. (Invited Speaker)

**Patsch, K.** and King, P. (2020). Beach Sustainability Assessment: The Development and Utility of an Interdisciplinary Approach to Sandy Beach Monitoring and Scoring. Presentation to California State Parks. Virtual Meeting. January 15, 2021. (Invited speaker)

**Patsch, K.** and King, P. (2020). Beach Sustainability Assessment: The Development and Utility of an Interdisciplinary Approach to Sandy Beach Monitoring and Scoring. Presentation the State Wide Coastal Sediment Management Workgroup. Virtual Meeting. December 2, 2020. (Invited Speaker)

**Patsch, K.** (2019). Safeguarding our Sea and Shores: Advancing Coastal Preservation and Adaptation. Surfrider National Super Summit. University of California, Irvine. August 10<sup>th</sup> and August 11<sup>th</sup>, 2019. (Invited Speaker and Panelist on both days).

**Patsch, K.** and Reineman, D. (2019). Coastal Access Equity and Environmental Change. *Impact Zones & Liminal Spaces*. San Diego State University. 28 April 2019. (Speaker and Panelist)

**Patsch, K.** (2019). Sea Level Rise and Impacts to Vulnerable and Disadvantaged Communities. *CSU Coast Luncheon for Ocean Day*. Sacramento, California, March 19, 2019. (Invited Speaker and Panelist)

**Patsch, K.** (2018). A River of Sand- Littorally. *Basics of Coastal Processes Workshop*. US Army Corps of Engineers. September 14, 2018, Port Hueneme, CA. (Invited Speaker)

**Patsch, K.,** and Anderson, S. (2018). Drone Survey Demo. *Beach Ecology Coalition 15<sup>th</sup> Annual Spring Meeting*. May 15<sup>th</sup>, 2018. Chase Palm Park Center, Santa Barbara, CA. (Invited Demonstration/Speaker)

**Patsch, K.** (2018). An Overview of Recent Projects Related to Sand Budgets, Sand Supply, Coastal Armoring, Management, and Valuing Southern California Beaches. *California Shore & Beach Preservation Association (CSBPA) Annual Conference- Coastal Conditions- Strategies for the Present and Future*. Bodega Marine Laboratory, Bodega Bay, CA, April 17-19, 2018 (Invited Speaker and Panelist)

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- Patsch, K.,** and Anderson, S. (2017). Coastal Geomorphology and Monitoring Beaches with Drones. *Beach Ecology Coalition 14<sup>th</sup> Annual Winter Meeting*. February 2, 2017, Pepperdine University, Malibu, CA. (Invited Speaker)
- Patsch, K.,** Cruz, C., Ashton, C., Stark, B., Sashen, W. (2016). Drone Education Program Panel. *Drone Educators Conference: Aerial Pathways to the Future*. Skyline College, Oct 22, 2016 San Bruno CA. (Invited Closing Panel Speaker)
- Patsch, K.** (2015). Sand Movement along the Coast. *Research and Education for Students and Teachers about the Ormond Beach Restoration (RESTOR) Project: Teacher Workshop*. Oxnard College Marine Education Center. October 16, 2015. (Invited Speaker)

## COMMUNITY ENGAGEMENT

- Patsch, K.** (2022). Invited Guest Lecturer. UC Santa Cruz Earth and Planetary Sciences Mentorship course. November 19, 2022. Invited Guest Speaker
- Patsch, K.** (2022). Regional Sediment: Science, Policy, and Programs. *Invited speaker at the Ventura Sand Summit*. June 23, 2022. (Invited Speaker)
- Patsch, K.,** Beyeler, M., and Merrill, N. (2022). *Using 'Big Data' to Better Understand Coastal Access: An Environmental Equity and Justice Perspective*. NOAA Ocean and coastal Management Division. June 1, 2022. Invited to Present to a national audience of NOAA staff.
- Patsch, K.** (2021). Invited Guest Lecturer. UC Santa Cruz Earth and Planetary Sciences Mentorship course. October 19, 2021. Invited Guest Speaker
- Patsch, K.** (2021). CSU COAST and CSUCI. Legislative briefing with Senator Monique Limon. September 24, 2021.
- Patsch, K.** (2021). BEACON Managers Workshop. September 14, 2021. (Co-Chair Facilitator and Speaker)
- Patsch, K.** (2021). BEACON Managers Workshop. June 14, 2021. (Invited Speaker and Co-Chair)
- Patsch, K.** and Reineman, D. (2021). CSU COAST sea-level rise legislative briefing with Rep. Toni Atkins of San Diego. April 12, 2021.
- Patsch, K.** (2021). Regional Sediment Management: Focus on the Santa Barbara Littoral Cell. *Presentation at the Ventura Sand Summit*. February 18, 2021. (Invited speaker)
- Patsch, K.** (2020). Invited Guest Lecturer. UC Santa Cruz Earth and Planetary Sciences Mentorship course. October 22, 2020. (Invited Guest Speaker)
- Patsch, K.** and Reineman, D. (2020). *Coastal Access Equity in California*. California Ocean Protection Council (OPC) Climate & Marine Justice in California Micro-Symposium. September 28, 2020. Virtual Meeting.
- Patsch, K.** (2019). Safeguarding our Sea and Shores: Advancing Coastal Preservation and Adaptation. *Rotary Club of Camarillo*. December 18<sup>th</sup>, 2019. (Invited Speaker)
- Patsch, K.** (2019). Beaches on the Edge. *Channel Islands Maritime Museum Speaker Series*. Ventura, California. January 16<sup>th</sup>, 2019. (Invited Speaker)
- Patsch, K.** (2018). The Sandshed: Understanding How Sand Moves Through our Coastal System. *Salty Sessions Speaker Series*. Leashless Brewing, Ventura, CA April 11, 2018. (Invited Speaker)

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**Patsch, K.** (2018). *Beaches on the Edge. CSUCI Library Lecture Series: Ojai Public Library, Ojai, California, March 10, 2018.*

## OUTREACH, NEWS ARTICLES & INTERVIEWS

Wilson, Alex. 2022. *Shifting Sands | Multidisciplinary Approach Needed to Combat Beach Erosion on the Central Coast. VC Reporter. July 6, 2022 | Alex Wilson, Bates Beach, Cover Story, Oxnard, Point Mugu, Port Hueneme, Ventura, Ventura County.* [LINK](#)

**Patsch, Kiki** and Anderson, Ryan. 2021. *Adapting to shoreline retreat: Finding a path forward with Kiki Patsch and Ryan Anderson. American Shoreline Podcast Network. September 17, 2021.* [LINK](#)

**Patsch, K** and Reineman, D. 2021. *KVTA 1590AM Radio Interview. Coastal access equity and sea level rise. 6-14-21 8:30 AM.*

Anderson, R., **Patsch, K.**, Lester, C., and Griggs, G. *USA- Adapting to shoreline retreat: Finding a Path Forward. Coastal News Today. February 3, 2021.* [LINK](#)

Englander, John. *Retreat Varies: California, Florida, and globally. John Englander's Personal Blog. Highlighting managed retreat article by Ryan Anderson, Kiki Patsch, Charles Lester, and Gary Griggs.* [LINK](#)

Anderson, R., Patsch, K., Lester, C., and Griggs, G. *USA- Adapting to shoreline retreat: Finding a Path Forward. Coastal News Today. December 12, 2020.* [LINK](#)

Interview with *Gimlet's Every Little Thing Podcast.* "[Sand: What's it really made of?](#)" with Guest **Dr. Kiki Patsch** August, 2020.

Xia, Rosanna. "As California beaches reopen, seawall construction becomes legislative battleground" *Los Angeles Times.* 20 May 2020. References work by **Dr. Kiki Patsch** and Gary Griggs. [LINK](#)

"CA-California's coastal development: Sea level rise and extreme events- where do we go from here?" *Coastal News Today, May 6, 2020.* Highlights Griggs and **Patsch.** [LINK](#)

Anderson, S., **Patsch, K.**, and Reineman, D. "California's beach closures offer a glimpse of the likely future. That should frighten us." *Los Angeles Times Op-Ed, April 3, 2020.* [LINK](#)

"What will Malibu's beach erosion problem look like in 20 years?" *Malibu Magazine, ES Media Services, LLC. September 2019.* Quotes from **Dr. Kiki Patsch.** [LINK](#)

Margolis, Jacob. "Bye-Bye Beaches: How Parts of SoCal's Iconic Coast Could Disappear in Our Lifetime." *LAist. September 20, 2019.* Quotes from **Dr. Kiki Patsch** [LINK](#)

Xia, Rosanna. "The California Coast Is Disappearing under the Rising Sea. Our Choices Are Grim." *Los Angeles Times, 7 July 2019.* References **Dr. Patsch's** coastal armoring database. [LINK](#)

Mulkern, Anne. *Adaptation: California uses untested powers for 'managed retreat'.* *ClimateWire.* Published Thursday May 20, 2019. **Dr. Kiki Patsch**, quoted as it relates to coastal armoring. [LINK](#)

KEYT News. *Local Environmental Professor (Dr. Kiki Patsch) weight in on impacts of Hurricane Florence.* September 12, 2018. [LINK](#)

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*California State University Working to Save California from Sea Level Rise.* California State University (CSU) Chancellor's Office. Article ID 697804. July 23, 2018. [LINK](#)

*Hurricane Matthew: Close to Home.* An Interview with **Dr. Kiki Patsch**. KEYT News. October 12, 2016. [LINK](#)

*El Nino Winter* KVTA 1590AM Radio Interview. February 2016. Sean Anderson and **Kiki Patsch**.

**Patsch, K.** and Nguyen, J. (Team Mentors). *Girls have Power: Girls Rock the STEAM Disciplines Inspired by Megan Smith.* CSUCI STEAM Hackathon. 2015. [LINK](#)