

COLLEGE OF WILLIAM & MARY
Curriculum Vitae Standard Format

PERSONAL INFORMATION

1. Name: Courtney Kay Harris Date: September 29, 2011

Office Address: Virginia Institute of Marine Science
College of William & Mary
PO Box 1346
Gloucester Point, VA 23062

Office Phone: 804/684-7194

Office Fax: 804/684-7250

Email: ckharris@vims.edu

2. Position: Associate Professor
Department of Physical Sciences
School of Marine Science

3. EDUCATION

Ph.D., 1999, University of Virginia College of Arts and Sciences, Department of Environmental Sciences, Charlottesville, VA.

M.S., 1994, University of Virginia College of Arts and Sciences, Department of Environmental Sciences, Charlottesville, VA.

M.S., 1987: University of California, Berkeley, CA. School of Engineering. Operations Research.

B.S., 1986: University of Virginia, Charlottesville, VA. School of Engineering and Applied Sciences. Applied Mathematics.

4. ACADEMIC POSITIONS

2007 – present: Associate Professor, School of Marine Sciences, Virginia Institute of Marine Sciences, College of William & Mary.

2007 – 2010: Alumni Memorial Distinguished Term Associate Professor, School of Marine Sciences, Virginia Institute of Marine Sciences, College of William & Mary.

2001 – 2007: Assistant Professor, School of Marine Sciences, Virginia Institute of Marine Sciences, College of William and Mary.

1999 – 2001: U.S. Geological Survey, Postdoctoral Fellow. Woods Hole Field Center, Woods Hole, MA.

5. HONORS, PRIZES AND AWARDS

2007—2010 Alumni Memorial Term Distinguished Associate Professorship.

1999—2001 U.S. Geological Survey Postdoctoral Fellowship Award.

1996 NASA Global Climate Change Fellow.

1990—1994 Dupont Fellowship, University of Virginia.

1984 Inducted into Tau Beta Pi, the Engineering Honor Society.
 1982—1986 Phillip Morris Scholarship.

6. CONTRIBUTIONS TO THE EDUCATIONAL PROGRAM

6a. Courses taught

Instructor or co-instructor (Enrollment in parenthesis; includes audits)

Spring 2011: MS554 Principles of Numerical Computing (2 for credit, 3 audits).
 Fall 2010 MS553 Benthic Boundary Layers and Sediment Transport (6 for credit, 2 audits)
 Spring 2010: MS554 Principles of Numerical Computing (4).
 Fall 2009: MS698-04 Numerical Models of Coastal Transport (11).
 Spring 2009: MS554 Principles of Numerical Computing (8).
 Spring 2008: MS502 Coastal and Estuarine Processes (22)
 MS520 Princ. of Coastal & Estuarine Physical Oceanography (8).
 Spring 2007: MS502 Coastal and Estuarine Processes (16).
 MS554 Principles of Numerical Computing (3).
 Fall 2006: MS553 Benthic Boundary Layers and Sediment Transport (7).
 Spring 2005: MS520 Princ. of Coastal & Estuarine Physical Oceanography (9).
 Fall 2004: MS553 Benthic Boundary Layers and Sediment Transport (9).
 MS554 Principles of Numerical Computing (3)
 Spring 2004: MS698-03 Numerical Sediment Transport (4).
 Fall 2003: MS554 Principles of Numerical Computing (6).
 Spring 2003: MS698-03 Sediment Transport in Marine Environments (8).
 Spring 2002: MS698-18 Interdisciplinary Estuarine Hydrodynamic Models (5).
 MS520 Princ. of Coastal & Estuarine Physical Oceanography (7).
 Fall 2001: MS554 Principles of Numerical Computing (3).

6.b. Students mentored

6.b.1. Major advisor

Graduated, 2010, Aaron Bever, Ph.D. from SMS/VIMS. “Integrating space- and time-scales of sediment-transport for Poverty Bay, New Zealand”.
 Graduated, 2009. Yanxia (Peony) Ma, Ph.D. from SMS/VIMS. Continental shelf sediment transport and depositional processes on an energetic, active margin: the Waiapu River shelf, New Zealand”.
 Graduated 2008. J. Paul Rinehimer, M.S. from SMS/VIMS. “Sediment transport and erodibility in the York River estuary: a model study”.
 Graduated 2007. Tara Kniskern, Ph.D. from SMS/VIMS. (co-advised with Steve Kuehl). “Shelf sediment dispersal mechanisms and deposition on the Waiapu River shelf, New Zealand”.
 Graduated 2006. Aaron Bever, M.S. from SMS/VIMS “Physical processes behind delta propagation and flood layer dynamics: Po river, Italy”.
 2009 – present. Julia Moriarty, M.S. candidate at SMS/VIMS.
 2010 – present. Justin Birchler, M.S. student at SMS/VIMS.

6.b.2. Student committee service

- Graduated 2011. Robin F.D. Wilson, obtained M.S. at Dalhousie University, Halifax, Canada. “Comparative assessment of a two-layered and multi-layered sediment model”. Advisor: K. Fennel.
- Graduated 2010. S. Jarrell Smith, obtained Ph.D. at SMS/VIMS. “Fine Sediment Dynamics in Dredge Plumes”. Advisor: C. Friedrichs.
- Graduated 2010. Tara Scott, obtained Ph.D. at SMS/VIMS. “Accounting for undesirable outputs in productivity measurements: Application to the California-Oregon drift gillnet fishery”. Advisor: J. Kirkley.
- Graduated 2010. David Elliott, obtained Ph.D. at SMS/VIMS. “Copepod carcasses, mortality and population dynamics in the tributaries of the lower Chesapeake Bay”. Advisor: K. Tang.
- Graduated 2010. David Rudders, obtained Ph.D. at SMS/VIMS. “Incorporating industry-based dredge surveys into the assessment of sea scallops, *Placopecten magellanicus*”. Advisor: W. DuPaul.
- Graduated 2009. Justine Woodward, obtained M.S. at SMS/VIMS. “Investigating the relationships between recruitment indices and estimates of adult abundance for striped bass, weakfish, and Atlantic croaker”. Advisors: M. Fabrizio and R. Latour.
- Graduated 2008. Lila Rose, obtained M.S. at SMS/VIMS. “Recent sedimentation patterns and facies distribution on the Waipaoa River, NZ”. Advisor: S. Kuehl.
- Graduated 2007. Jennifer Miselis, obtained Ph.D. at SMS/VIMS. “Nearshore Morphology and Lithology: Links to Framework Geology and Shoreline Change”. Advisor: J. McNinch.
- Graduated 2006. Todd Gedamke, obtained Ph.D. at SMS/VIMS. “Developing a Stock Assessment for the Barndoor Skate (*Dipturus laevis*) in the Northeast United States”. Advisors: W. DuPaul, J. Hoenig, and J. Musick.
- Graduated 2005. Lisa Addington, obtained M.S. at SMS/VIMS. “Distinguishing Sediment Transport Modes to the Outer-Shelf off the Waipu River, New Zealand”. Advisor: S. Kuehl.
- Graduated 2005. John Walter, obtained Ph.D. at SMS/VIMS. “Incorporating Aspects of Space into Stock Assessments of Several Marine Species”. Advisor: J. Hoenig.
- Graduated 2004. Heidi Romine, obtained M.S. at SMS/VIMS. “Documenting the suspended sediment and bottom sediment dynamics of a two estuarine turbidity maximum system using ^7Be and ^{234}Th .” Co-Advisors: S. Kuehl and C. Friedrichs.
- 2008 – present. Lindsey Kraatz, Ph.D. candidate at SMS/VIMS. Advisor: C. Friedrichs.
- 2009 – present. Lila Rose, Ph.D. candidate at SMS/VIMS. Advisor: S. Kuehl.
- 2009 – present. Grace Cartwright, seeking Ph.D. at SMS/VIMS. Advisor: C. Friedrichs.
- 2010 – present. Yongjian Xiao, Ph.D. candidate at SMS/VIMS. Advisor: M. Friedrichs.
- 2010 – present. Kelsey Fall, M.S. candidate at SMS/VIMS. Co-Advisors: C. Friedrichs and M. Friedrichs.
- 2010 – present. Natalia Blackburn, M.S. candidate at SMS/VIMS. Advisor: J. Orth.

Undergraduate Mentoring

Summer 2011, Mentor to Daniel O'Hara (co-advised with Dr. Tara Kniskern), an undergraduate from Indiana University of Pennsylvania, in the College of William and Mary SMS/VIMS Summer Internship Program.

Summer 2008, Mentor to Julia Moriarty (co-advised with Dr. Tara Kniskern), an undergraduate from University of Chicago, in the College of William and Mary SMS/VIMS Summer Internship Program.

Summer 2007, Mentor to Maggie Simon, an undergraduate at Haverford College, In the College of William and Mary SMS/VIMS Summer Internship Program.

Summer 2003, Mentor to Jennifer Foley, an undergraduate at Marietta College, Marietta, Ohio in the College of William and Mary SMS/VIMS Summer Internship Program.

Post-doctoral Mentoring

2010 – present, Tara Kniskern, VIMS.

2007 – 2008, Kevin Xu, SMS/VIMS. Now at Coastal Carolina University.

2007, Tara Kniskern, SMS/VIMS. Now at VIMS.

Fall, 2003, David Fugate, SMS/VIMS. Now at Florida Gulf Coast University.

7. FELLOWSHIPS AND GRANTS7.a. All fellowships, grants, contracts, etc., awarded by outside agencies.

Shelf-slope sediment exchange in the northern Gulf of Mexico: application of numerical models for extreme events. H. Arango (Rutgers U., PI), C. Harris (VIMS co-PI), E. Meiburg (UCSB), J. Syvitski (U. Colorado). Funded by Bureau of Ocean Energy Management (BOEM). October, 2011 – September, 2014. (\$220,000 VIMS portion).

Improved observation, analysis and modeling of fine sediment dynamics in turbid, biologically active coastal environments. C. Friedrichs (PI), M. Friedrichs and C. Harris (co-PIs). Funded by National Science Foundation (OCE-1061781) for April 1, 2011 – April 1, 2014. (\$644,025).

A Super-regional Testbed to Improve Models of Environmental Processes on the U.S. Atlantic and Gulf of Mexico. C. Friedrichs (VIMS PI), Co-PIs: J.X. Shen, M.A. Friedrichs, C.K. Harris, and H.V. Wang. Funded by the National Oceanic and Atmospheric Administration for June 1, 2010 – May 31, 2011. (VIMS portion is \$879,717).

MARGINS Post-Doctoral Fellowship: Investigating sediment dynamics on the Waipaoa River shelf, New Zealand: creating a framework to predict preservation on continental margins. C. Harris (PI), T. Kniskern (VIMS, co-PI). Funded by National Science Foundation (OCE-0948319) for April, 2010 – March, 2012. (\$228,641).

Collaborative Research: Formation, Reworking and Accumulation of Sedimentary Deposits, Waipaoa River Shelf, New Zealand. J.P. Walsh (PI), R. Corbett (ECU), C. Harris (VIMS co-PI), A. Ogson (U.W. co-PI), and A. Orpin (NIWA co-PI). Funded by National Science Foundation (OCE-0841049) for April, 2009 – May, 2012. (\$947,180; VIMS portion is \$164,023).

- NGOMEX 2009 - Mechanisms Controlling Hypoxia: Integrated Causal Modeling. VIMS: C. Harris (VIMS lead), D. Forrest; TAMU: T. Bianchi, P. Chapman, S. DiMarco (PI), N. Guinasso, R. Hetland, J. Morse; ALSO: A. Quigg (TAMU-G lead); M. Dagg (LUMCON lead); N. Walker (LSU lead); K. Xu (CCU lead); K. Fennel (Dalhousie lead). Funded by National Oceanic and Atmospheric Administration for September 1, 2009 – August 31, 2014 (VIMS Portion is \$158,000).
- Collaborative research: A real-time and rapid response observing system for the study of physical and biological controls on muddy seabed deposition, reworking, and resuspension (supplement). C. Friedrichs (PI), Co-PIs: R. Diaz, C.K. Harris, S. Kuehl, L. Schaffner; Co-PI at UMCES: L. Sanford. Funded by National Science Foundation for January 1, 2009 – December 31, 2011. (\$388,000).
- Dispersal of Fine Sediment in the Coastal Ocean: Sensitivity to Aggregation and Stratification. C.K. Harris (PI). Funded by the Office of Naval Research Coastal Geosciences Program for January 1, 2007 – March 31, 2009 (\$134,482).
- NGOMEX 2006 - Mechanisms Controlling Hypoxia: Real-time Observations. VIMS PI: C.K. Harris, S. DiMarco (TAMU PI), P. Chapman (LSU PI), R. Hetland (TAMU), N.L. Guinasso (TAMU), G. Rowe (TAMU-Galveston), N. Walker (LSU), E. D'Sa (LSU), K. Fennel (Dalhousie PI). Funded by National Oceanic and Atmospheric Administration for August 1, 2005 – July 31, 2008 (\$501,000, VIMS Portion is \$19,000).
- Collaborative research: A real-time and rapid response observing system for the study of physical and biological controls on muddy seabed deposition, reworking, and resuspension. C. Friedrichs (PI), Co-PIs: R. Diaz, C.K. Harris, S. Kuehl, L. Schaffner; Co-PI at UMCES: L. Sanford. Funded by National Science Foundation (OCE-0536572) for January 1, 2006 – January 1, 2009. (\$1,947,000).
- MARGINS Source to Sink: Collaborative research on shoreline progradation and sediment exchange between the coastal plain and inner shelf, Waipaoa Sedimentary System. J. McNinch (PI) and C.K. Harris (Co-PI). J. Swenson (Co-PI at U. Minnesota, Duluth). Funded by National Science Foundation (OCE-0504690) for May 1, 2005 – May 1, 2008. (\$522,700).
- Numerical modeling of estuarine turbidity maximum -- representation of bottom boundary layer and turbulence mixing within the Chesapeake Bay model. H. Wang (PI) and C.K. Harris (Co-PI). Funded by the Maryland Department of the Environment for February 1, 2004 – June 31, 2007 (\$149,600).
- Suspended sediment and sea bed modification driven by energetic waves and a strong coastal current. C.K. Harris (PI). Funded for February 1, 2004 – September 1, 2006 by the Office of Naval Research Physical Oceanography Program (\$67,600).
- Comparison of present day and historical dispersal patterns in the western Adriatic. C.K. Harris (PI). Funded by the Office of Naval Research Coastal Geosciences Program for March 15, 2004 – September 1, 2006 (\$97,900).
- Sediment dispersal off a high-yield river: observations and modeling of gravity-driven transport and deposition. S.A. Kuehl, C.T. Friedrichs, C.K. Harris, J.E. McNinch, and L.D. Wright (Co-PIs). Funded by the National Science Foundation (OCE-0326831) for August, 2003 – July, 2006 (\$647,000).

- An integrated observational, modeling, and information networking system in support of marine operations in bays, ports, and harbors: a lower Chesapeake Bay pilot study. L.D. Wright, J. Brubaker, C. Friedrichs, C. Harris, J. Shen, and H. Wang (Co-PIs). Funded for July 1, 2003 – June 30, 2004 by the U.S. Coast Guard Research and Development Center (\$250,000).
- Planning for a national community sediment transport model. C. Sherwood, R.W. Geyer (PIs). H. Arango, A.F. Blumberg, B.P. Butman, S.M. Glenn, T.F. Gross, J. Hamrick, C.K. Harris, P.L. Shrestha, R.P. Signell (Co-PIs). Funded for August, 2001 – July, 2002 by National Oceanographic Partnership Program (NOPP), cost-shared through U.S. Geological Survey.
- Sediment redistribution and seabed modifications in the western Adriatic. C.K. Harris (PI). Funded for October, 2001 – September, 2003 by the Office of Naval Research Coastal Geosciences Program (\$100,000).
- Quantitative shelf sediment transport. C.K. Harris (PI). Funded for July, 2001 – June, 2004 by the U.S. Geological Survey (\$66,000).
- Three-dimensional modeling of sediment trapping and dispersal on river-influenced continental shelves. C.K. Harris (PI). Funded for October, 2000 – September, 2001 by the Office of Naval Research Coastal Geosciences Program (\$20,000).

8. RESEARCH

8.a. Refereed publications in periodicals, chapters in books, law review articles, and conference proceedings. (Harris students italicized)

- Xu, K., **C.K. Harris**, R.D. Hetland and J. Kaihatu. 2011. Dispersal of Mississippi and Atchafalaya sediment on the Texas–Louisiana shelf: Model estimates for the year 1993. *Continental Shelf Research*. 31(15), 1558 – 1575. doi: 10.1016/j.csr.2011.05.008
- Bever, A.J., J.E. McNinch, and **C.K. Harris**. 2011. Hydrodynamics and sediment-transport in the nearshore of Poverty Bay, New Zealand: observations of nearshore sediment segregation and oceanic storms. *Continental Shelf Research*. 31(6), 507-526. doi:10.1016/j.csr.2010.12.007.
- Elliott, D.T., **C.K. Harris**, and K. Tang. 2010. Dead in the water: The fate of copepod carcasses in the York River estuary, Virginia. *Limnology and Oceanography*, 55(5): 1821 – 1834. doi:10.4319/lo.2010.55.5.1821.
- Ma, Y., C.T. Friedrichs, **C.K. Harris**, and L.D. Wright. 2010. Deposition on the Waiapu, New Zealand, continental shelf by seasonal wave- and current-supported sediment gravity flows interacting with spatially varying bathymetry. *Marine Geology*, 275: 199 – 211. doi:10.1016/j.margeo.2010.06.001.
- Bever, A.J., **C.K. Harris**, C.R. Sherwood, and R.P. Signell. 2009. Deposition and flux of sediment from the Po River, Italy: an idealized and wintertime numerical modeling study. *Marine Geology*, 260(1-4): 69 – 80.
- Hawley, N., **C.K. Harris**, B.M. Lesht, and A.H. Clites. 2009. Sensitivity of a sediment transport model for Lake Michigan. *Journal of Great Lakes Research*, 35(4): 560 – 576.

- Kniskern, T.A., S.A. Kuehl, C.K. Harris, and L. Carter. 2009. Sediment accumulation patterns and fine-scale strata formation on the Waiapu River shelf, New Zealand. Marine Geology, 270 (1-4): 188-201.*
- Harris, C.K., C.R. Sherwood, R.P. Signell, A.J. Bever, and J.C. Warner. 2008. Sediment Dispersal in the Northwestern Adriatic Sea. Journal of Geophysical Research, 113, C11S03, doi: 10.1029 / 2006JC003868.**
- Rinehimer, J.P., C.K. Harris, C.R. Sherwood, and L.P. Sanford, 2008. Estimating cohesive sediment erosion and consolidation in a muddy, tidally-dominated environment: model behavior and sensitivity. Estuarine and Coastal Modeling, Proceedings of the Tenth Conference, November 5-7, Newport RI. M.L. Spaulding, ed. 819-838.*
- Warner, J.C., C.R. Sherwood, R.P. Signell, C.K. Harris, and H. Arango. 2008. Development of a three-dimensional, regional, coupled wave-, current-, and sediment-transport model. Computers and Geosciences, 34: 1284 – 1306.*
- Wheatcroft, R.A., P.L. Wiberg, C.R. Alexander, S.J. Bentley, D.E. Drake, C.K. Harris & A.S. Ogston. 2007. Post-depositional alteration and preservation of sedimentary strata. Chapter III of Continental Margin Sedimentation: From Sediment Transport to Sequence Stratigraphy, C. A. Nittrouer et al. (eds.), Blackwell Press.*
- Syvitski, J.P.M., L. Pratson, P. Wiberg, M. Steckler, M. Garcia, R. Geyer, C. Harris, E. Hutton, J. Imran, H. Lee, M. Morehead, and G. Parker. 2007. Prediction of Margin Stratigraphy. Chapter XI of Continental-Margin Sedimentation: From Sediment Transport to Sequence Stratigraphy, C. Nittrouer, et al. (eds), Blackwell Press.*
- Kuehl, S., C. Alexander, L. Carter, L. Gerald, T. Gerber, C. Harris, J. McNinch, A. Orpin, L. Pratson, J. Syvitski, and J.P. Walsh. 2006. Understanding sediment transfer from land to ocean. EOS, Transactions of the American Geophysical Union, 87(29): 281, 286,*
- Harris, C.K., P. Traykovski, and W.R. Geyer. 2005. Flood dispersal and deposition by near-bed gravitational sediment flows and oceanographic transport: A numerical modeling study of the Eel River shelf, northern California. Journal of Geophysical Research. 110(C09025): doi: 10.1029 / 2004JC002727.**
- Lee, C.M., F. Askari, J. Book, S. Carniel, B. Cushman-Roisin, C. Dorman, J. Doyle, P. Flament, C.K. Harris, B.H. Jones, M. Kuzmic, P. Martin, A. Ogston, M. Orlic, H. Perkins, P. Poulain, J. Pullen, A. Russo, C. Sherwood, R.P. Signell, D. Thaler Detweiler. 2005. Northern Adriatic response to a wintertime Bora wind event, EOS, Transactions of the American Geophysical Union, 86(16): 157, 163, 165.*
- Harris, C.K., P. Traykovski, and W.R. Geyer. 2004. Including a near-bed turbid layer in a three dimensional sediment transport model with application to the Eel River shelf, northern California. Estuarine and Coastal Modeling; Proceedings of the Eighth International Conference. M.L. Spaulding, et al. (editors), American Society of Civil Engineers. 784—803.**
- Sherwood, C.R., S. Carniel, L. Cavaleri, J. Chiggiato, H. Das, J. Doyle, C.K. Harris, A. Niedoroda, J. Pullen, C.W. Reed, A. Russo, M. Sclavo, R. Signell, P. Traykovski, and J.C. Warner. 2004. Sediment dynamics in the Adriatic Sea investigated with coupled models. Oceanography, 17(4): 58—69.*

- Harris, C.K.**, B. Butman, and P. Traykovski. 2003. Winter-time circulation and sediment transport in the Hudson Shelf Valley. *Continental Shelf Research*, 23: 801—820.
- Harris, C.K.** and P.L. Wiberg. 2002. Across-shelf sediment transport: interactions between suspended sediment and bed sediment. *Journal of Geophysical Research*, 107(C1): 10.1029/2000JC000634.
- Sherwood, C.R., **C.K. Harris**, W.R. Geyer, and B. Butman. 2002. Toward a community coastal sediment-transport modeling system: report of the second workshop. *EOS, Transactions of the American Geophysical Union*. 83(50): 605
- Wiberg, P.L., D.E. Drake, **C.K. Harris**, and M.E. Noble. 2002. Sediment transport on the Palos Verdes shelf over seasonal to decadal time scales. *Continental Shelf Research*, 22(6—7): 987-1004
- Wiberg, P.L. and **C.K. Harris**. 2002. Desorption of p,p'-DDE from sediment during resuspension events on the Palos Verdes shelf, California: a modeling approach. *Continental Shelf Research*, 22(6—7): 1005-1023.
- Harris, C.K.** and P.L. Wiberg. 2001. A two-dimensional, time-dependent model of suspended sediment transport and bed reworking for continental shelves. *Computers and Geosciences*, 27: 675—690.
- Sherwood, C.R., R.P. Signell, **C.K. Harris**, and B. Butman. 2000. Workshop discusses community models for coastal sediment transport. *EOS, Transactions of the American Geophysical Union*, 81(43): 502.
- Harris, C.K.** and R.P. Signell. 1999. Circulation and sediment transport in the vicinity of the Hudson Shelf Valley. Estuarine and Coastal Modeling; Proceedings of the Sixth International Conference. M.L. Spaulding, H.L. Butler (editors), American Society of Civil Engineers. 380-394.
- Signell, R.P. and **C.K. Harris**. 1999. Modeling sand-bank formation around a tidal headland. Estuarine and Coastal Modeling; Proceedings of the Sixth International Conference. M.L. Spaulding, H.L. Butler (editors), American Society of Civil Engineers. 209-222.
- Harris, C.K.** and P.L. Wiberg. 1997. Approaches to quantifying long-term continental shelf sediment transport with an example from the northern California STRESS mid-shelf site. *Continental Shelf Research*, 17(11): 1389-1418.
- Wiberg, P.L. and **C.K. Harris**. 1994. Ripple geometry in wave-dominated environments. *Journal of Geophysical Research*, 99 (C1): 775-789.

8.d. Articles published in non-refereed conference proceedings.

- Harris, C.K.** Sediment dispersal in the western Adriatic: bed limits to resuspension. COMDELTA: Open Conference on COMparing Mediterranean and Black Sea ProDELTA's. Aix-en-Provence, France, October, 2003.
- Harris, C.K.** Circulation in the Hudson shelf valley: interannual variability. Mid-Atlantic Bight Physical Oceanography Meeting (MABPOM). Old Dominion University, Norfolk, VA. October, 2002.
- Harris, C.K.**, D.E. Drake, and P.L. Wiberg. Redistribution of sediment on the continental shelf off of the Eel River, northern California. Poster presented at the AGU Chapman Conference on the Formation of Sedimentary Strata on Continental Margins, Ponce, Puerto Rico. June, 2001.

- Buchholtz ten Brink, M.R., B. Butman, **C.K. Harris**, E.L. Mccray, and W.C. Schwab. Sediment dynamics and contaminant accumulation in New York Bight. Seventh Federal Interagency Sedimentation Conference, Reno, Nevada, 2:63—65. March, 2001.
- Geyer, W.R, **C.K. Harris**, and P. Traykovski. Three-dimensional modeling of sediment dispersal on the Eel River shelf during flood events. Poster presented at the Chapman Conference on the Formation of Sedimentary Strata on Continental Margins, Ponce, Puerto Rico. June, 2001.

8.e. Invited scholarly papers and talks

Outside VIMS/SMS (Harris students and post-docs italicized)

- Harris, C.K.**, H. Arango, J. Syvitski, E. Meiburg. Shelf-slope sediment exchange in the northern Gulf of Mexico: Application of numerical models for extreme events. Post-Award Meeting, Bureau of Ocean and Energy Management (BOEM), Herndon, VA, September 30, 2011.
- Harris, C.K.** Coupling sediment transport and biological processes within a numerical ocean model. Gordon Research Conference on Ocean Modeling. June 26 – July 1, 2011, Mount Holyoke College, MA.
- Harris, C.K.** Linking sediment processes and biogeochemistry within the Regional Ocean Modeling System. SURA Testbed Shelf Hypoxia Face-to-Face Meeting, March 3-4, 2011, Washington, DC.
- Harris, C.K.** Sediment dispersal offshore of small mountainous rivers: Insights from numerical models. Source to sink: Triggers on the inner shelf. Invited talk presented at the AGU Chapman Conference on Source to Sink Systems around the World and Through Time, Oxnard, CA, January 24 – 27, 2011.
- Harris, C.K.**, C. Friedrichs, *J.P. Rinehimer*, and C.R. Sherwood. Sediment trapping and effective settling velocity in a partially mixed estuary: a modeling study of the York River estuary, Virginia. Invited, *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract GO33A-07, February 24, 2010, Portland, OR.
- Harris, C.K.**, *J.P. Rinehimer*, and C.R. Sherwood. Erodibility and sediment trapping in a partially mixed estuary: a modeling study of the York River estuary, Virginia. Invited seminar, Old Dominion University, Department of Ocean, Earth & Atmospheric Sciences, October, 8 2009.
- Harris, C.K.** and *K. Xu*. Numerical modeling for MCH: Linking sediment to transport and biogeochemistry in the Northern Gulf of Mexico. Mechanisms Controlling Hypoxia (MCH) All-Hands Meeting, College Station, TX, May, 2009.
- Harris, C.K.** and *K. Xu*. Northern Gulf of Mexico: Linking sediment and biological processes within the Regional Ocean Modeling System (ROMS). Invited talk presented at the ROMS User Group Meeting, Sydney, Australia, April, 2009.
- Harris, C.K.** Sediment transport offshore of the North Island, New Zealand: Coherence, suspensions, and gravity flows. Invited talk presented at the Margins Source-to-Sink Synthesis and Integration Workshop, Gisborne, NZ, April, 2009.
- Harris, C.K.**, C.R. Sherwood, R.P. Signell, *A.J. Bever*, and J.C. Warner. ROMS / CSTMS Used to Study Sediment Dispersal in the Northwestern Adriatic Sea.

- Invited talk to the Community Sediment Transport Modeling, Applications Working Group. Woods Hole, MA, February 11, 2009 (via WebEX).
- Harris, C.K.** Sediment bed limits to erosion: non-cohesive sediments. Invited talk at the meeting of the Community Sediment Transport Modeling committee, Woods Hole, MA, May 22, 2007.
- Harris, C.K.** Sediment dispersal and deposition in the Adriatic Sea: numerical model results and comparison to field data. Invited talk to Office of Naval Research Progress Review: Southeast Region, Tallahassee, FL May 3, 2007.
- Harris, C.K.** Sediment dispersal and deposition in the Adriatic Sea: numerical model results and comparison to field data. Invited seminar to East Carolina University, February 16, 2007.
- Harris, C.K.** Sediment dispersal and deposition in the Adriatic Sea: numerical model results and comparison to field data. Invited seminar to the Texas A&M University Oceanography Department, College Station TX, February 2, 2007.
- Harris, C.K.** Processes controlling sediment transport in the coastal ocean. Invited seminar to the Texas A&M University Oceanography Department, College Station, TX, February 1, 2007.
- Harris, C.K.** Processes controlling sediment transport in the coastal ocean. Invited seminar to the Texas A&M University Marine Studies Department, Galveston, TX, January 31, 2007.
- Harris, C.K.** Sediment dispersal and deposition in the Adriatic Sea: numerical model results and comparison to field data. Invited seminar to Institute of Marine and Coastal Studies (IMCS), Rutgers University, New Brunswick, NJ. October 9, 2006.
- Harris, C.K.** Sediment Dispersal and Trapping in Poverty Bay, New Zealand over Multiple Timescales. Invited talk presented at the Margins Source-to-Sink Theoretical and Experimental Institute (TEI), northern California, September, 2006.
- Harris, C.K.** Three-dimensional numerical modeling of sediment dispersal in the Adriatic Sea. Seminar presented to the High Performance Computing Group, College of William and Mary. Williamsburg, VA. November, 2005.
- Harris, C.K.** Dispersal of fluvial sediment in the Adriatic Sea. Seminar presented to the Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA. March, 2005.
- Harris, C.K.** Models, measurements and mud: geological and physical oceanography in the coastal ocean. Eastern Regional Meeting of the National Science Teachers' Association, Richmond, VA, December, 2004.
- Harris, C.K.** Flood dispersal and deposition on the northern California shelf by near-bed sediment flows and oceanographic transport. Seminar presented to the Louisiana State University Department of Oceanography and Coastal Sciences, Baton Rouge, LA, November, 2004.
- Harris, C.K.** Quantifying sediment dispersal: examples from northern California and the Adriatic Sea. Office of Naval Research Site Visit, St. Petersburg, Florida, April, 2004.
- Harris, C.K.** Sediment redistribution and seabed modifications in the western Adriatic. Naval Research Laboratory Seminar, Monterey, CA, March, 2003.

- Harris, C.K.** Contaminant transport offshore of New York / New Jersey: mud, models and measurements. University of Virginia, Department of Environmental Sciences Undergraduate Seminar Series. Charlottesville, VA. November, 2002.
- Harris, C.K.,** B. Butman, and P. Traykovski. Winter-time sediment transport in the Hudson shelf valley. North Carolina State University Department of Marine, Environmental, and Atmospheric Sciences (MEAS) Seminar. Raleigh, NC. March, 2002.
- Harris, C.K.** NOPP / USGS Coastal Community Sediment-Transport Model: Report to the NSF Margins Source-to-Sink Community Sediment Modeling Workshop. Boulder, CO. February, 2002.
- Harris, C.K.,** W.R. Geyer, and P. Traykovski. Flood layer formation on the northern California shelf by near-bed gravitational sediment flows and oceanographic transport. *EOS, Transactions, American Geophysical Union, 83(4)*: Ocean Sciences Meeting Supplement, Abstract OS22K-02. Invited. Honolulu, HI. February, 2002.
- Harris, C.K.** Winter-time sediment transport in the Hudson shelf valley. Rutgers University, Institute of Marine and Coastal Sciences Seminar. East Brunswick, NJ. November, 2001.
- Harris, C.K.** Flood layer formation on the northern California shelf: oceanographic transport and near-bed gravitational flows. University of Maryland Center for Environmental Science, Horn Point Laboratory Seminar. Cambridge, MD. October, 2001.
- Harris, C.K.** Sediment transport in the vicinity of the Hudson shelf valley. Department Seminar, Department of Geological Sciences, University of South Carolina, Columbia, SC. February, 2000.
- Harris, C.K.** Sediment reworking on shelves: the importance of sediment availability and waves. *Presented at:* Coastal Ocean Fluid Dynamics Lab Seminar, Woods Hole Oceanographic Institute, Woods Hole, MA. October, 1999. Department Seminar, Department of Geological Sciences, University of South Carolina, Columbia, SC, November, 1999. Department Seminar, Geology Department, Boston College, Boston, MA, December, 1999.
- Harris, C.K.** Circulation and sediment transport in the vicinity of the Hudson shelf valley. U.S. Geological Survey, Woods Hole Field Center Branch Meeting. Woods Hole, MA. December, 1999.
- Harris, C.K.** The importance of advection and flux divergence in the transport and redistribution of continental shelf sediments. *Presented at:* Department Seminar, Department of Environmental Sciences, University of Virginia, Charlottesville, VA. April, 1998. Branch seminar; US Geological Survey Woods. Menlo Park, CA. June, 1998. Branch seminar; US Geological Survey Woods Hole Field Center, Woods Hole, MA. June, 1998.
- Wiberg, P.L. and **C.K. Harris.** Bed reworking and p,p'-DDE desorption during resuspension events on the Palos Verdes shelf: a modeling approach. *EOS, Transactions of American Geophysical Union. 76(3):OS37.* Invited. AGU/ASLO Ocean Sciences Meeting, San Diego, CA. February 1996.

Within VIMS/SMS

- Harris, C.K.** Efforts to couple sediment transport and biological processes within a numerical ocean model. Department of Physical Sciences Seminar. September 15, 2011.
- Harris, C.K.** Mud and models in the coastal ocean: Why, what, and how? Seminar Series for the Research Experience for Undergraduates (REU) Summer Internship Program (SIP). July, 2011.
- Harris, C.K., J.J. Birchler, J.P. Rinehimer, C.R. Sherwood, and L. Sanford.** Sediment transport models: putting sediment into biology, and biology into sediment. Chesapeake Bay Modeling Forum, VIMS, Gloucester Point, VA. May, 2011.
- Harris, C.K., J.P. Rinehimer, and C.R. Sherwood.** Erodibility and sediment trapping in a partially mixed estuary: a modeling study of the York River estuary, Virginia. Department of Physical Sciences Seminar, VIMS, Gloucester Point, VA. October, 2009.
- Harris, C.K.** Mud, Measurements, and Models: Sediment Transport in the Coastal Ocean. VIMS Eastern Shore Lab (ESL) Public Lecture Series Wachapreague, VA. December, 2007
- Harris, C.K.** Mud, Measurements, and Models: Sediment Transport in the Coastal Ocean. Department of Physical Sciences Seminar, VIMS, Gloucester Point, VA. December, 2007.
- Harris, C.K. and J.E. McNinch.** Sediment dispersal and trapping in Poverty Bay, New Zealand over multiple timescales. Department of Physical Sciences Seminar, VIMS, Gloucester Point, VA. October, 2006
- Harris, C.K.** Dispersal of fluvial sediment in the Adriatic Sea. Department of Physical Sciences Seminar, VIMS, Gloucester Point, VA. April, 2005.
- Harris, C.K.** Sources and dispersal of sediment in the western Adriatic. Department of Physical Sciences Seminar, VIMS, Gloucester Point, VA. April, 2003.
- Harris, C.K.** Mud, models, and measurements: Continental shelf sediment transport. Seminar Series for the Research Experience for Undergraduates (REU) Summer Internship Program (SIP). June, 2003.
- Harris, C.K.** Winter-time sediment transport in the Hudson shelf valley. Department of Physical Sciences Seminar, VIMS, Gloucester Point, VA. September, 2001.
- Harris, C.K.** Feedbacks between sediment resuspension and seabed texture on continental shelves. Virginia Institute of Marine Science Seminar. Gloucester Point, VA. April, 2000.

8.f. Contributed scholarly papers and talks. (*Harris students/post-docs italicized*)

- Harris, C.K., J.J. Birchler, J.P. Rinehimer, C.R. Sherwood, and L. Sanford.** Sediment transport models: putting sediment into biology, and biology into sediment. Poster presented at the Chesapeake Hydrodynamic Workshop, Edgewater, MD, June 9 – 10, 2011.
- Bever, A.J. and C.K. Harris.** The influence of the geometry of Poverty Bay on sediment deposition, dispersal, and sorting within the Waipaoa Sedimentary System, New Zealand: numerical model investigations comparing present-day, 2 kya, and 7 kya configurations. Poster presented at the AGU Chapman Conference on Source to

- Sink Systems around the World and Through Time, Oxnard, CA, January 24 – 27, 2011.
- Moriarty, J.M.* and **C.K. Harris**. Wave- and Current- Induced Bed Stress on the Waipaoa Shelf, New Zealand: Variations in Time and Space. Poster presented at the AGU Chapman Conference on Source to Sink Systems around the World and Through Time, Oxnard, CA, January 24 – 27, 2011.
- Bever, A.J.* and **C.K. Harris**. Variations in sediment-transport between different dispersal basin geometries: A case study of Poverty Bay, New Zealand. Poster presented at the Community Surface Dynamics Modeling System (CSDMS) All-Hands Meeting, San Antonio, TX, October 14 – 17, 2010.
- Harris, C.K.**, K. Xu, C. Sherwood, K. Fennel, R. Hetland. Coupling sediment dynamics and biogeochemical models within ROMS with application to the Louisiana – Texas shelf. Poster presented at the Community Surface Dynamics Modeling System (CSDMS) All-Hands Meeting, San Antonio, TX, October 14 – 17, 2010.
- Harris, C.K.**, *J.P. Rinehimer*, C. Sherwood, and L. Sanford. Representation of mud within a three-dimensional hydrodynamic and sediment model for the York River. Chesapeake Modeling Symposium 2010, Annapolis, MD, May 10 – 11, 2010.
- Bever, A.J.*, **C.K. Harris** and J.E. McNinch. Integrating space- and time-scales for sediment transport for Poverty Bay, New Zealand and the nearfield continental shelf. Poster presented at the Margins Source-to-Sink Synthesis and Integration Workshop, Gisborne, NZ, April, 2009.
- Bever, A.J.* and **C.K. Harris**. Integrating space- and time-scales for sediment transport for Poverty Bay, New Zealand and the nearfield continental shelf. Poster presented at the ROMS User Group Meeting, Sydney, Australia, April, 2009.
- Harris, C.K.** and A.J. Bever. Representation of near-bed sediment gravity flows within the Regional Ocean Modeling System (ROMS). Poster presented at the ROMS / TOMS User Group Workshop, Los Angeles, CA, October, 2007.
- Harris, C.K.**, *A. Bever*, C.R. Sherwood, and R.P. Signell. Sediment resuspension in the Adriatic Sea: sensitivity of model calculations to sediment bed properties. Poster presented at the EuroSTRATAFORM Annual Meeting, Salamanca, Spain, October, 2005.
- Sherwood, C.R., **C.K. Harris**, A. Ogston, R.P. Signell, J.C. Warner, R.A. Wheatcroft, and P.L. Wiberg. Sediment Transport along the Apennine margin. Presented at the EuroSTRATAFORM Annual Meeting, Salamanca, Spain, October, 2005.
- Harris, C.K.**, P. Traykovski, and W.R. Geyer. Flood layer formation on the northern California shelf by near-bed gravitational flows and oceanographic transport. Poster presented at *Sediment transport and accumulation on continental margins: A Tribute to Dr. Richard W. Sternberg*. September, 2004. Friday Harbor, Washington.
- Harris, C.K.**, C.R. Sherwood, *A. Bever*, and R.P. Signell. Sediment dispersal mechanisms within the Adriatic Sea: recent advances from the EuroStrataform Program. ADRIA02/03 Meeting, Venice, Italy, June, 2004.
- Harris, C.K.** Sediment Dispersal in the Western Adriatic: Bed Limits to Resuspension. Plenary Session at the ComDELTA Meeting, Aix en Provence, France, October, 2003.

Harris, C.K. Dispersal of sediment in the western Adriatic: fall of 2002. Coastal Ocean Fluid Dynamics Lab Seminar, Woods Hole Oceanographic Institute, Woods Hole, MA. August, 2003.

Harris, C.K. Dispersal of Po River sediment in the western Adriatic: three-dimensional transport model. Plenary Session at the Annual Meeting of EuroSTRATAFORM, PROMESS, and EuroDelta programs. Winchester, U.K. September, 2002.

Harris, C.K. Sediment redistribution and seabed modifications in the western Adriatic with lessons from northern California. ADRIA02/03 Meeting. La Spezia, Italy. April, 2002.

Harris, C.K. Sediment transport and circulation near the Hudson shelf valley: winter 2000 field experiment. Coastal Ocean Fluid Dynamics Lab Seminar. Woods Hole Oceanographic Institute, Woods Hole, MA. January, 2001.

8.j. Unrefereed publications not listed above. (Harris students italicized)

Harris, C.K., J.P. Rinehimer, and S.-C. Kim. 2010. Representation of Bed Stresses within a Model of Chesapeake Bay. *Special Report in Applied Marine Science and Ocean Engineering, No. 424.* Virginia Institute of Marine Science, College of William & Mary, Gloucester Point, Virginia.

Harris, C.K., C.R. Sherwood, R.P. Signell, *A.J. Bever,* and J.C. Warner. 2009. ROMS / CSTMS Used to Study Sediment Dispersal in the Northwestern Adriatic Sea. Contribution to the Community Sediment Transport Modeling, Applications Working Group WIKI. (www.cstms.org).

Butman, B., P.S. Alexander, **C.K. Harris,** P.A. Traykovski, M.B. tenBrink, F.S. Lightsom, and M.A. Martini. 2002. Oceanographic Observations in the Hudson Shelf Valley, December 1999 – April, 2000: Data Report. *U.S. Geological Survey Open File Report 02-217.*

8.k. Research reports from grants or contract work. (Harris students italicized)

Harris, C.K. 2011. Annual report (Year 2): Collaborative research: formation, reworking and accumulation of sedimentary deposits, Waipaoa River Shelf, New Zealand. Annual report to the National Science Foundation for Award Number OCE-0841049.

Harris, C.K. 2010. Annual report (Year 1): Collaborative research: formation, reworking and accumulation of sedimentary deposits, Waipaoa River Shelf, New Zealand. Annual report to the National Science Foundation for Award Number OCE-0841049.

Harris, C.K. 2010. Dispersal of fine sediment in the coastal ocean: Sensitivity to aggregation and stratification and planning for a tidal flats DRI: Numerical modeling of seasonal and spatial variations of sediment texture. Final report to the Office of Naval Research for Award Numbers N00014-07-1-0312 and N00014-07-1-0953.

Harris, C.K. 2008. Dispersal of fine sediment in the coastal ocean: Sensitivity to aggregation and stratification and planning for a tidal flats DRI: Numerical modeling of seasonal and spatial variations of sediment texture. Annual report to the Office of Naval Research for Award Numbers N00014-07-1-0312 and N00014-07-1-0953.

- Harris, C.K.** 2007. Dispersal of fine sediment in the coastal ocean: Sensitivity to aggregation and stratification and planning for a tidal flats DRI: Numerical modeling of seasonal and spatial variations of sediment texture. Annual report to the Office of Naval Research for Award Numbers N00014-07-1-0312 and N00014-07-1-0953.
- Harris, C.K.** 2007. Comparison of present day and historical dispersal patterns in the western Adriatic. Final report to the Office of Naval Research for Award Number N00014-04-1-0378.
- Harris, C.K.,** H.V. Wang, and *J.P. Rinehimer*. 2006. Numerical modeling of estuarine turbidity maximum -- representation of bottom boundary layer and turbulence mixing within the Chesapeake Bay model. Final report to the Maryland Department of the Environment.
- Harris, C.K.** 2006. Comparison of present day and historical dispersal patterns in the western Adriatic. Annual progress report to the Office of Naval Research for Award Number N00014-04-1-0378.
- Harris, C.K.** 2006. Suspended sediment and seabed modifications driven by energetic waves and a strong coastal current. Annual progress report to the Office of Naval Research for Award Number N00014-04-1-0222.
- Harris, C.K.,** 2005. Numerical modeling of estuarine turbidity maximum -- representation of bottom boundary layer and turbulence mixing within the Chesapeake Bay model. Quarterly reports on April, 2004; July, 2004; October, 2004; January, 2005; January, 2006; April, 2006.
- Harris, C.K.** 2005. Comparison of present day and historical dispersal patterns in the western Adriatic. Annual progress report to the Office of Naval Research for Award Number N00014-04-1-0378.
- Harris, C.K.** 2005. Suspended sediment and seabed modifications driven by energetic waves and a strong coastal current. Annual progress report to the Office of Naval Research for Award Number N00014-04-1-0222.
- Harris, C.K.** 2005. Sediment redistribution and seabed modification in the western Adriatic. Final technical report to the Office of Naval Research for Award Number N00014-02-1-0139, 10 p.
- Harris, C.K.** 2005. Final Report: USGS – Virginia Institute of Marine Sciences Memorandum of Understanding; quantitative shelf sediment transport. 3 p.
- Harris, C.K.** 2004. Comparison of present day and historical dispersal patterns in the western Adriatic. Annual progress report to the Office of Naval Research for Award Number N00014-04-1-0378.
- Harris, C.K.** 2004. Suspended sediment and seabed modifications driven by energetic waves and a strong coastal current. Annual progress report to the Office of Naval Research for Award Number N00014-04-1-0222.
- Harris, C.K.** 2003. Sediment redistribution and seabed modification in the western Adriatic. Annual progress report to the Office of Naval Research for Award Number N00014-02-1-0139, 5 p.
- Harris, C.K.** 2002. Three-dimensional modeling of sediment trapping and dispersal on river-influenced continental shelves. Annual progress report to the Office of Naval Research for Award Number N00014-01-1-0082, 5 p.

Harris, C.K. 2002. Sediment redistribution and seabed modification in the western Adriatic. Annual progress report to the Office of Naval Research for Award Number N00014-02-1-1-0139, 5 p.

Harris, C.K. 2001. Three-dimensional modeling of sediment trapping and dispersal on river-influenced continental shelves. Annual progress report to the Office of Naval Research for Award Number N00014-01-1-0082, 5 p.

8.n. Work in progress or submitted: Papers in Review (*Harris students and post-docs italicized*):

Ma, Y., **C.K. Harris**, C.T. Friedrichs, and L.D. Wright. Current-supported gravity flows on the continental shelf offshore of the Waiapu River, New Zealand: Observations and model results” In preparation.

8.o. Other scholarly activity, including papers presented at professional meetings and publications of abstracts.

Meeting Administration.

- 2009 – 2010. Member of Program Committee. AGU/ASLO Ocean Science Meeting, Portland, Oregon, February, 2010.
- 2009 – 2010. Co-convenor (with N. Hawley, NOAA; and L. Sanford, UMCES) “GO04 Sediment processes I – III: transport and deposition in lakes, estuaries, coastal bays, and continental shelves”, at AGU/ASLO Ocean Science Meeting, Portland, Oregon, February, 2010.
- 2007 – 2008. Co-convenor (with N. Hawley, NOAA; and L. Sanford, UMCES) “OS O54 Sediment transport in lakes, estuaries, and shallow shelves”, at AGU/ASLO Ocean Science Meeting, Orlando, Florida, March, 2008.
- 2002. Co-convenor (with C. Sherwood, U.S. Geological Survey) “OS21 Application and Assessment of Coastal Sediment Transport Models, Sessions I, II, and III” at AGU/ASLO Ocean Sciences Meeting, Honolulu, HI, February. 2002.
- 2002. Co-Convenor (with C.R. Sherwood, U.S. Geological Survey, and W.R. Geyer, Woods Hole Oceanographic Institution): Toward a Community Coastal Sediment-Transport Model Town Meeting. Sponsored by National Ocean Partnership Program (NOPP). Honolulu HI, February 13, 2002.
- 2002. Co-Convenor (with C.R. Sherwood, U.S. Geological Survey; and W.R. Geyer, Woods Hole Oceanographic Institution). Building a Community System for Coastal Sediment-Transport Modeling. Sponsored by National Ocean Partnership Program (NOPP). Williamsburg, VA, September 30 – October 2, 2002.
- 2000. Co-Convenor (with R.P. Signell, C.R. Sherwood, U.S. Geological Survey; and W.R. Geyer, Woods Hole Oceanographic Institution): Community Sediment Transport Workshop; sponsored by U.S. Geological Survey, Woods Hole, MA, June 20—21, 2000.

Abstracts (Harris students and post-docs italicized).

Bever, A.J., C.K. Harris, J.E. McNinch. 2010. Storm and fair-weather driven sediment transport offshore of a small mountainous river in Poverty Bay, New Zealand.

- EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract GO35A-12, Portland, OR.
- Lentz, S.J., B. Butman, and **C.K. Harris**. 2010. Asymmetry in the wind-driven current response in Hudson Shelf Valley. *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract PO14A-05, Portland, OR.
- Ma, Y, C.T. Friedrichs, **C.K. Harris**, and L.D. Wright. 2010. Deposition by seasonal wave- and current-supported sediment gravity flows interacting with spatially varying bathymetry: Waiapu shelf, New Zealand. *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract GO35A-08, Portland, OR.
- Moriarty, J.M., T.A. Kniskern, **C.K. Harris**, J.A. Warrick. 2010. Seasonal variation in sediment transport and deposition during winter and spring flood events: Umpqua River, Oregon. *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract GO25B-04, Portland, OR.
- Xu, K., **C.K. Harris**, R.D. Hetland, J.M. Kaihatu, N.D. Walker, and R. Bellotte. 2010. Dispersal of Mississippi and Atchafalaya sediment on the Texas-Louisiana Shelf. *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract GO25B-02, Portland, OR.
- Harris, C.K.**, J.P. Rinehimer, and C.R. Sherwood. 2009. Erodibility and sediment trapping in a partially mixed estuary: A modeling study of the York River estuary, Virginia. *Coastal and Estuarine Research Federation*, Portland, OR, November, 2009.
- Fennel, K.; **C.K. Harris**, R. Hetland, J. Kaihatu, and K. Xu. 2009. A coupled physical-biogeochemical-sediment model for the TX-LA shelf in the northern Gulf of Mexico. *Coastal and Estuarine Research Federation*, Portland, OR, November, 2009.
- Kniskern, T.A., J. Warrick, J. Moriarty, K. Farnsworth, and **C.K. Harris**. 2009. Effects of Seasonal River-Ocean Coherence on Sediment Transport, Deposition and Reworking along the U.S. West Coast. *Coastal and Estuarine Research Federation*, Portland, OR, November, 2009.
- Bever, A.J., J.E. McNinch, and **C.K. Harris**. 2008. Shallow water hydrodynamics and sediment dispersal offshore of a small mountainous river: the Waipaoa River, New Zealand; *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract 134-2224, Orlando, FL.
- Friedrichs, C.T., R.J. Diaz, **C.K. Harris**, S.A. Kuehl, J.E. McNinch, L.P. Sanford, L.C. Schaffner. 2008. MUDBED: Multi-Disciplinary Benthic Exchange Dynamics; *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract O24-921, Orlando, FL.
- Kniskern, T A, **C.K. Harris**, and S.A. Kuehl. 2008. Hydrodynamic, fluvial, and tectonic controls on sediment dispersal and deposition on the Waiapu River shelf, New Zealand; *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract 134-1310, Orlando, FL.
- Ma, Y., L.D. Wright, **C.K. Harris**, and C. Friedrichs. 2008. Observations of sediment transport on the continental shelf off the mouth of the Waiapu River, New Zealand: evidence for current-supported gravity flows; *EOS, Transactions of the*

- American Geophysical Union Ocean Sciences Meeting Supplement, Abstract 165-1118, Orlando, FL.
- Rinehimer, J.P. and C.K. Harris.* 2008. Feedbacks between bed consolidation, resuspension, and turbidity in a partially mixed estuary; *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract O54-2689, Orlando, FL.
- Simon, M.W., J.P. Rinehimer, and C.K. Harris.* 2008. Seasonal sediment erodibility and tidal effects in an idealized numerical model of the York River estuary; *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract O26-877, Orlando, FL.
- Xu, K, C.K. Harris, R.D. Hetland, and J. Kaihatu.* 2008. Sediment transport from the Mississippi and Atchafalaya Rivers to the Louisiana /Texas shelf; *EOS, Transactions of the American Geophysical Union Ocean Sciences Meeting Supplement*, Abstract O54-1168, Orlando, FL.
- Rinehimer, J.P., C.K. Harris, C.R. Sherwood, and L. Sanford.* 2007. Including a simple bed consolidation model in a three-dimensional numerical model of estuarine sediment transport. *Tenth International Conference on Estuarine and Coastal Modeling*, Newport, RI, November, 2007.
- Xu, K, C.K. Harris, R.D. Hetland, and J. Kaihatu.* 2007. Towards a sediment transport model of the Louisiana /Texas shelf; *Estuarine Research Federation*, Providence, RI, November, 2007.
- Ahlgren S., P.D. Bauman, R.J. Dillon, N. Gallagher, M.E. Jamison, A.C. King, J. Lee, K.A. Siwicke, J.C. Borgeld and S.A. Goldthwait, C.K. Harris, and R.A. Wheatcroft.* 2006. Flood Deposition Analysis of Northern California's Eel River (Flood- DANCER). *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS23B-1660, San Francisco, CA.
- Bever, A.J., C.K. Harris, and J.E. McNinch.* 2006. Sediment dispersal in modern and mid-Holocene basins: implications for shoreline progradation and sediment bypassing, Poverty Bay, New Zealand. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS23B-1647, San Francisco, CA.
- Harris, C.K., J.E. McNinch, and A.J. Bever.* 2006. Sediment dispersal and trapping within Poverty Bay, offshore of the Waipaoa River, New Zealand. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS23B-1646, San Francisco, CA.
- Hawley, N., A.H. Clites, and C.K. Harris.* 2006. Model studies of sediment transport and bed reworking in the Laurentian Great Lakes. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS31A-1616, San Francisco, CA.
- Kim, S.-C., C. Cerco, J. Gailiani, C.K. Harris, and J.P. Rinehimer.* 2006. Perspective of sediment transport within a water quality modeling framework for the Chesapeake Bay. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS31A-1615, San Francisco, CA.
- Kniskern, T.A., C.K. Harris, and S. Kuehl.* 2006. Flood sediment dispersal and deposition on the Waiapu River shelf, East Cape, New Zealand. *EOS,*

- Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS12A-02, San Francisco, CA.
- Wolinsky, M.A., J.C. Swenson, A.J. Bever, and **C.K. Harris**. 2006. Late Holocene shoreline dynamics and sediment partitioning in the Waipaoa sedimentary system, New Zealand. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 87(52), Abstract OS23B-1645, San Francisco, CA.
- Sherwood, C.R. L. Sanford, A. Blumberg, **C.K. Harris**, J.C. Warner, R.P. Signell. 2006. Cohesive sediment algorithms in ROMS and sediment test cases. Abstract submitted to the 2006 ROMS/TOMS European Workshop, November, 2006, Madrid, Spain.
- Bever, A.J. and **C.K. Harris**. 2006. Sediment Transport off the Po River: A Model – Data Comparison. Physics of Estuaries and Coastal Seas (PECS), Astoria, OR, September, 2006.
- Bever, A.J., **C.K. Harris**, C.R. Sherwood, and R.P. Signell. 2006. Dominant wind regimes and their impacts on nearfield deltaic sediment dynamics: Po River, Italy. *EOS, Transactions of the American Geophysical Union, Ocean Science Meeting Supplement*, 87(36), Abstract OS16A-35, Honolulu, HI, February, 2006.
- Harris, C.K.** and J. McNinch. 2006. The potential for sediment resuspension and dispersal within Poverty Bay, offshore of the Waipaoa River, New Zealand. *EOS, Transactions of the American Geophysical Union, Ocean Science Meeting Supplement*, 87(36), Abstract OS16A-12. Honolulu, HI, February, 2006.
- Kniskern, T.A., **C.K. Harris**, and S.A. Kuehl. 2006. Sediment deposition on the Waiapu River shelf, N.Z., implications for sediment transport mechanisms and event preservation. *EOS, Transactions of the American Geophysical Union, Ocean Science Meeting Supplement*, 87(36), Abstract OS11L-04. Honolulu, HI, February, 2006.
- Harris, C.K.** and J.P. Rinehimer. 2005. Chesapeake Bay bottom boundary layer: roughness and shear stresses. *Estuarine Research Federation*. Norfolk, VA, October, 2005.
- Harris, C.K.**, R.P. Signell, C.R. Sherwood, and A. Bever. 2004. Dispersal of fluvial sediment in the Adriatic Sea, Italy. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 85(47), Abstract OS11D—07, San Francisco, CA December 2004.
- Harris, C.K.** 2004. Sediment dispersal in the Adriatic Sea: response to variations in sea level. *32nd International Geological Congress*. Florence, Italy, August, 2004.
- Sherwood, C.R., **C.K. Harris**, and R.P. Signell. 2004. Modeling sedimentary dynamics and the formation of Holocene continental margin deposits in the western Adriatic Sea. *32nd International Geological Congress*. Florence, Italy, August, 2004.
- Harris, C.K.**, C.R. Sherwood, and R.P. Signell. 2004. Sediment dispersal mechanisms within the Adriatic Sea: insights from the EuroStrataform Program. *EOS, Transactions of the American Geophysical Union, Ocean Sciences Meeting Supplement*, 84(52), Abstract OS52E—07, Portland, OR, January, 2004.
- Harris, C.K.**, P. Traykovski, and W.R. Geyer. 2003. Accounting for a near-bed turbid layer in a three dimensional sediment transport model with application to the Eel River shelf, northern California, *Eighth International Conference on Estuarine and Coastal Modeling*, Monterey, CA, November, 2003.

- Harris, C.K.**, C.R. Sherwood, E. Mullenbach, and J.D. Pullen. 2003. Dispersal of sediment in the western Adriatic during energetic wintertime forcing. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 84(46), Abstract OS52A-0900, San Francisco, CA December 2003.
- Harris, C.K.**, C.R. Sherwood, J.C. Warner, and P.L. Wiberg. 2003. Sediment bed limits to resuspension and transport with application for the north-western Adriatic. *InterCoh abstracts*, November 2003, Gloucester Point, VA.
- Harris, C.K.**, J.D. Pullen, R.P. Signell, and J.D. Doyle. 2003. Sources and dispersal of sediment in the western Adriatic. *Geophysical Research Abstracts: Vol. 5*, 11235. AGU EGU Joint Session, Nice, France.
- Buchholtz ten Brink, M. B. Butman, M. Bothner, L. Poppe, R.W. Murray, J. Varekamp, E. Thomas, E.L. Mecray, **C.K. Harris**, and R.P. Signell. 2002. Fate and Impact of Contaminants in Sediments of the NE United States. *Eos, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 83(47), Abstract OS21D-06, San Francisco, CA, December, 2002.
- Harris, C.K.** and B. Butman. 2002. Sediment redistribution in the New York bight: influence of wind-forced currents, energetic waves, and topography. *EOS, Transactions of the American Geophysical Union, Ocean Sciences Meeting Supplement*, 83(4), Abstract OS12B-154. Honolulu, HI. February, 2002.
- Harris, C.K.**, B. Butman, P. Traykovski, and M.B. ten Brink. Winter-time sediment transport in the Hudson Shelf Valley. *Eos, Transactions of the American Geophysical Union, Spring Meeting Supplement*, 82(20):S232. Boston, MA. May, 2001.
- Traykovski, P., **C.K. Harris**, B. Butman, and Buchholtz ten Brink, M.R. 2001. Erosion of fine-grained sediment in the Hudson Shelf Valley offshore of New York. *Eos, Transactions of the American Geophysical Union, Spring Meeting Supplement*, 82(20):S229. Boston, MA. May, 2001.
- Harris, C.K.**, W.R. Geyer, and R.P. Signell. Dispersal of flood sediment by oceanographic currents and energetic waves. *EOS, Transactions of the American Geophysical Union, Ocean Sciences Meeting Supplement* 80(49):OS281. San Antonio, Texas. February, 2000.
- Harris, C.K.** and R.P. Signell. 1999. Circulation and sediment transport in the vicinity of the Hudson Shelf Valley. *Sixth International Conference on Estuarine and Coastal Modeling*, New Orleans, LA. November, 1999.
- Signell, R.P. and **C.K. Harris**. 1999. Modeling sand-bank formation around a tidal headland. *Estuarine and Coastal Modeling. Sixth International Conference on Estuarine and Coastal Modeling*, New Orleans, LA. November, 1999.
- Harris, C.K.** and P.L. Wiberg. The effect of bottom boundary layer resuspension on the emplacement and modification of event beds on the Eel river shelf, northern California. *EOS, Transactions of the American Geophysical Union, Ocean Sciences Meeting Supplement*, 79(1):OS17. San Diego, CA. February, 1998.
- Harris, C.K.** and P.L. Wiberg. The significance of flux divergence and advection in shelf sedimentation patterns. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 79(45):F473. San Francisco, CA. December, 1998.
- Wiberg, P.L., **C.K. Harris**, and D.A. Cacchione. Comparison of sediment transporting events on the Eel and Russian River shelves. *EOS, Transactions of the American*

- Geophysical Union, Ocean Sciences Meeting Supplement*, 79(1):OS16. San Diego, CA. February, 1998.
- Harris, C.K.** and P.L. Wiberg. Wave and current climatology of near-bed flow for the Palos Verdes shelf with application to sediment transport. *EOS, Transactions of American Geophysical Union. Ocean Sciences Meeting Supplement*, 76(3):OS49. San Diego, CA. February, 1996.
- Noble, M.A., **C.K. Harris**, P.L. Wiberg, and C. Sherwood. Statistical characterizations of current and wave patterns on the southern California shelf off Palos Verdes for use in sediment-transport models. *EOS, Transactions of American Geophysical Union. Ocean Sciences Meeting Supplement* 76(3):OS49. February, 1996.
- Harris, C.K.** and P.L. Wiberg. Ripple geometry in wave dominated environments. *EOS, Transactions of the American Geophysical Union, Fall Meeting Supplement*, 72(44):245. San Francisco, CA. December, 1991.

9. PROFESSIONAL SERVICE

9.b. SMS / VIMS Governance

VIMS Academic Council

Department Representative, 2010 – present.

VIMS Elections and Nominations Committee

Department Representative, 2005 – present.

VIMS Parking Committee

Department Representative, 2004 – present.

VIMS Search committee for position of Associate Dean of Academic Studies (2010)

VIMS Academic Status and Degrees Committee (AS & DC)

Department Representative, 2004 – 2010.

Committee Chair, 2006 – 2010.

VIMS Library Advisory Committee

Department Representative, 2003 – 2009.

VIMS Committee to recommend a Chancellor Professor (2009).

VIMS Search Committee for Virginia SeaGrant Assistant Director of Research (2009).

VIMS Search committee for Virginia SeaGrant Director (2007).

VIMS Search committee for ITNS Research Computing Specialist (2007).

Information Technology Infrastructure Project Committee; Member, 2004 – 2007.

Best Student Paper Committee;

Department Representative, 2004 – 2006.

VIMS Admissions Committee

Department Alternate, 2004 – 2006.

VIMS / SMS Seminar Committee

Department Representative, 2001—2005.

Co-Chair, 2002 – 2005.

VIMS Faculty Council

Department Alternate, 2002 – 2004.

9.c. Editorial board services, review panels, program reviews, national or international research programs.

Editorial Boards and Panels:

- Panel Member, Hudson River Foundation. Proposal Reviews, February, 2011.
- AGU Chapman Conference on Source to Sink Systems around the World and Through Time. Meeting participant, Oxnard, CA, January 24 – 27, 2011.
- Editorial Advisory Committee, *Continental Shelf Research*, 2004—present.
- Community Surface Dynamics Modeling System (CSDMS) All-Hands Meeting 2010: Modeling for Environmental Change; Workshop participant. Sponsored by CSDMS. San Antonio, TX, October 14 – 17, 2010.
- Margins Source-to-Sink Synthesis and Integration Workshop participant. Gisborne, New Zealand. April 5 – 9, 2009.
- Community Sediment Dynamics Modeling System (CSDMS): Marine Working Group Workshop participant. Sponsored by CSDMS. Charlottesville, VA, February 24 – 15, 2009.
- Community Sediment Dynamics Modeling System (CSDMS): Chesapeake Focus Research Group meeting participant. Sponsored by CSDMS. Gloucester Point, VA, November 10, 2009.
- Panel Member. National Science Foundation CTS (Chemical and Transport Systems) Geophysical and Computational Program. Proposal Reviews. February, 2008.
- Panel Member. National Science Foundation Marine Geology and Geophysics Program. Proposal Reviews. November, 2006.
- Margins Source-to-Sink Theoretical and Experimental Institute (TEI) participant. Northern California, September 17 – 22, 2006.
- Panel Member. National Science Foundation CTS (Chemical and Transport Systems) Environmental Fluid Mechanics and Coastal Engineering Program. Proposal Reviews. April, 2006.
- Community Sediment Dynamics Modeling System Workshop participant. Sponsored by National Science Foundation. Minneapolis, MN, May 7—9, 2004.
- Panel Member. National Science Foundation OCE – Physical Oceanography Program. Proposal Reviews. November, 2003.
- MARGINS Source – to – Sink Workshop Participant. Waipaoa Study Area, North Island, NZ. May, 2003.
- MARGINS Community Sediment Modeling Workshop participant. Sponsored by National Science Foundation. Boulder, CO, February 20 – 22, 2002.
- AGU Chapman Conference on the Formation of Sedimentary Strata on Continental Margins; meeting participant, Ponce, Puerto Rico. June, 2001.
- MARGINS Source – to – Sink Planning Workshop participant, Sponsored by National Science Foundation. South Lake Tahoe, CA, October, 2000.
- MARGINS Source – to – Sink Planning Workshop participant, Sponsored by NSF. Lake Quinalt, WA September 11—15, 1999.

National or International Research Programs:

Member of (1) Marine Working Group, and (2) Chesapeake Bay Focus Research Group, advising the Community Surface Dynamics Modeling System (CSDMS) NSF program. 2007 – present.

Proposal Reviews:

- 2011: Hudson River Foundation. (19).
National Science Foundation (2 in OCE).
- 2010: National Oceanographic and Atmospheric Administration Coastal Hypoxia Research Program (NOAA CHRP) (1).
National Science Foundation (2 in OCE).
- 2009: National Science Foundation (2 in OCE).
New Hampshire Sea Grant (1).
- 2008: National Science Foundation (15: 6 in OCE; 9 in CTS).
- 2007: National Science Foundation (4: 3 in OCE; 1 in IIS).
Department of Energy National Institute for Climatic Change Research (DOE NICCR) (1).
Ohio Sea Grant (1).
- 2006: National Science Foundation (38: 30 in OCE; 1 in EAR; 7 in CTS).
Washington Sea Grant (1).
National Oceanographic and Atmospheric Administration Coastal Hypoxia Research Program (NOAA CHRP) (1).
- 2005: National Science Foundation (8).
- 2004: National Science Foundation (3).
SERDP (1).
Petroleum Research Fund ACS (1).
- 2003: National Science Foundation (21).
- 2002: National Science Foundation (1).
South Carolina DoD / EPSCoR (1).
- 2000: South Carolina Sea Grant (1).

Journal Article Reviews:

- 2011: *Continental Shelf Research* (3).
Journal of Geophysical Research – Oceans (3).
- 2010: *Continental Shelf Research* (4).
Journal of Geophysical Research – Oceans (2).
Ocean Dynamics (1).
- 2009: *Continental Shelf Research* (3).
Journal of Geophysical Research – Oceans (4).
Ocean Dynamics (1).
Marine Geology (1).
- 2008: *Continental Shelf Research* (1).
Estuarine and Coastal Modeling Conference Proceedings (1).
- 2007: *Continental Shelf Research* (3).
Geology (1).
Limnology and Oceanography (1).

- 2006: *Continental Shelf Research* (5).
Journal of Geophysical Research – Earth Surface (1).
Computers and Geosciences (1).
- 2005: *InterCoh volume, Elsevier Science Publishing* (2).
Continental Shelf Research (5).
Journal of Geophysical Research – Oceans (1).
- 2004: *InterCoh volume, Elsevier Science Publishing* (2).
Journal of Geophysical Research – Oceans (4).
Continental Shelf Research (1).
Estuarine and Coastal Modeling Conference Proceedings (2).
- 2003: *Journal of Geophysical Research – Oceans* (1).
Estuarine, Coastal, and Shelf Science (1).
Continental-Margin Sedimentation: Transport to Sequence, C. Nittrouer, et al. (editors), (1 chapter).
- 2002: *Estuarine, Coastal, and Shelf Science* (1).
Continental Shelf Research (1).
- 2001: *Estuaries* (1).
Continental Shelf Research (1).
Journal of Coastal Research (1).

10. ADVISORY SERVICE TO VIMS MANDATE

10.c. Service to industry.

VIMS / William and Mary – Industry partnership committee participant. 2004—2005, 2007, 2009. Intermittent attendance at bi-monthly meetings, and presented material at two meetings.

10.d. Regional, national or international management commissions or programs.

STAC Tidal Sediments mini-workshop, invited participant, Annapolis, MD, May 28-29, 2009.

Consulted on numerical modeling activities with NOAA Great Lakes Experimental Research Lab (GLERL) scientist N. Hawley, 2006, 2008 – 2009; research product: Hawley et al. (2009).

Chesapeake Bay Program Modeling Subcommittee Quarterly Meeting Participant: January, 2004; April, 2004; January, 2005; January 2006; April, 2006; July 2006; October, 2006. Annapolis, MD. Presented material at these meetings. Also attended other Quarterly Meetings either in person or via conference call.

External Reviewer; Beta Test for Operational Capability of the Littoral Sediment Optics Model (LSOM) for the Naval Research Laboratory. February – August, 2003.

10.e. Public Outreach

Seminar Speaker to VIMS Eastern Shore Lab (ESL) Public Lecture Series, December, 2007.

American Geophysical Union's representative at the Eastern Regional Meeting of the National Science Teachers' Association, Richmond VA, December, 2004.

VIMS Marine Science Day Presenter: May, 2004.

Blue Crab Bowl Science Judge: February, 2003; February, 2005; February, 2007.
Interviewed by Steve Glazier, TV-3, Winchester, VA. June 4, 2010. Topic: Potential Oil
Spill Risks and Impacts within Virginia Waters.