**DANIEL M. HANES, PhD**
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***Contact*:** dan.hanes@slu.edu; hanesdan@gmail.com;

***Education*:** **B. A.**, 1977, Applied Mechanics and Engineering Science, Univ. of Calif., San Diego
**M. S.**, 1979, Oceanography, U.C.S.D.; Regents Fellowship, FOR Fellow
**Ph.D.**, 1983, Oceanography, Scripps Institution of Oceanography, U.C.S.D.

***Positions held following Ph.D.:***

1983-1984: Killam Postdoctoral Fellow, Dalhousie University, Nova Scotia, Canada
1984-1989: Assistant then Associate Professor, University of Miami, Florida
1989-2002: Associate then **Full Professor**, Univ. of Florida, Dept. Civil and Coastal Eng.
2002-2011: Research Oceanographer, United States Geological Survey, Santa Cruz, CA
2011-2024: Professor, Department of Earth and Atmospheric Sciences, Saint Louis University
2011-present: President and chief scientist, Heartland and Coastal Solutions, Inc.
2025-present: Professor, Department of Earth, Environmental, and Geospatial Sciences, SLU

***Career Summary:***

Dan Hanes is a scientist, educator, and consultant whose expertise is at the nexus of water, particles, and people. His activities are focused on hydrodynamics, sediment dynamics, and community resilience to flooding along rivers and coasts. In both academic and federal government organizations Hanes has conceived and carried out numerous basic and applied research projects, and advised approximately 35 graduate students and post-docs. He has over 300 publications and conference presentations that are widely cited in the scientific literature. Hanes has provided scientific and managerial leadership for national and international collaborative projects. Hanes has served as an advisor and reviewer for several government agencies and universities. Hanes provides consulting expertise and litigation support in surf-zone safety, rip current drownings, small boat accidents, coastal development, flooding, environmental contamination, particle science and technology, and sustainable coasts and watersheds. Hanes is a founding member of the Board of Directors of the PADI Foundation, a not for profit organization that funds research and educational projects related to marine and coastal environments.

*Three **most recent** peer reviewed publications (ORCID: 0000-0001-6771-1956):*

**Hanes, D.M**., A Descriptive Analysis of the Morphology and Movement of the Golden Gate Sand Waves, Geosciences, 15, 87, **2025**. https://doi.org/10.3390/geosciences15030087

**Hanes, D.M.,** Longshore Currents. In: Shroder, J.J.F. (Ed.), Treatise on Geomorphology, 2nd Edition, vol. 8. Elsevier, Academic Press, pp. 83–99. https://dx.doi.org/10.1016/B978-0-12-818234-5.00051-1**, 2022.**

Santos, A.I., D. Carinhas, A. Oliveira, J.P. Pinto, M.C. Freitas, and **D.M. Hanes**, A statistical interpretation of acoustic backscatter and laser responses to suspended particle variations in the coastal shelf, Marine Geology, 436 (106474), **2021.**

*Five **most cited** publications from Google Scholar: **h-index 40; over 5900 total citations**:*

Thorne, P.D. and D. M. Hanes, A review of acoustic methods for the study of small scale sediment transport processes, Continental Shelf Research, 22, 603-632, 2002. 627 citations.

Hanes, D. M. and D. L. Inman, Observations of rapidly flowing granular-fluid materials, Journal of Fluid Mechanics, 150, 357-380, 1985. 489 citations.

Talbot, C.J., E. Bennett, K. Cassel, D.M. Hanes, E. Minor, H. Paerl, P. Raymond, R. Vargas, P. Vidon, W. Wollheim, and M.A. Xenopoulos, The impact of flooding on aquatic ecosystem services, Biogeochemistry, 141(3), 439-461, DOI: 10.1007/s10533-018-0449-7, 2018. 330 citations.

Jenkins, J.T. and D.M. Hanes, Collisional sheet flows of sediment driven by a turbulent fluid, Journal of Fluid Mechanics, 370, 29-52, 1998. 226 citations.

Hsu, T.J., and D.M. Hanes, The Effects of Wave Shape on Sheet Flow Sediment Transport, Journal of Geophysical Research Oceans, doi:10.1029/2003JC002075, 2004. 198 citations.

## Personal Narrative of Professional Accomplishments

A consistent research theme through my early career was to apply granular flow mechanics to the phenomenon of sediment transport. Merging these two fields using the principles of applied mechanics led to innovative breakthroughs in sediment transport research. There had previously been no momentum-based theories for intense bedload sediment transport because of the lack of constitutive and energy conservation equations for flowing granular materials. In a series of papers (e.g. Hanes and Inman, 1985; Hanes and Bowen, 1985; Jenkins and Hanes, 1998; Hsu and Hanes, 2004; Yu, Hsu, and Hanes, 2010) my colleagues and I established a new "granular" paradigm for better understanding the mechanics of intense bedload sediment transport.

A career-long research theme has been to develop new observational and data analysis techniques in order to carry out innovative experimental studies and interpret the results. For example, in recognition of the disturbance that traditional instrumentation generated when observing sediment transport processes, my colleagues and I developed new acoustic-based instruments for remotely measuring sediment concentration and velocity. The development, application, and interpretation of acoustic measurements (Hanes and Huntley, 1986; Hanes et. al, 1988; Vincent, Hanes, and Bowen, 1991; Lee and Hanes, 1995; Lee and Hanes, 1996; Jette and Hanes, 1997; Thosteson and Hanes, 1998; Thorne and Hanes, 2002; Hanes, 2012; Agrawal and Hanes, 2015; Hanes, 2016, Santos et al., 2021) have led to a new era of in-situ sediment transport observations.

In mid-career I started working on larger scale problems related to the sustainability of coasts and coastal watersheds. For example, from 2003 to 2008 I initiated and led a project on sustainable coasts that addressed diverse issues such as sustainable sediment management, storm-induced erosion, morphology and dynamics of sandwaves, sediment transport processes near Crissy Marsh, the morphology and evolution of the San Francisco ebb tidal delta, and the impacts of sea level rise on coastal geomorphology and coastal hazards (Barnard et. al, 2006; Elfrink, Hanes, and Ruessink, 2006; Hanes and Barnard, 2007; Shi, Kirby, and Hanes, 2007; Sterlini, Hulscher, and Hanes, 2009; Hanes, 2009; Shi, Hanes, et. al, 2011; Hanes, Ward, and Erikson, 2011; Hanes, 2012; Hanes and Erikson, 2013; Hanes, 2025)

Since moving to Saint Louis University my research scope has expanded into sustainable aspects of midwestern watersheds and fluvial systems. Current research efforts include: the roles of climate change and land use changes in recent flooding events (Talbot et al., 2018; Macmillan et al., 2018); the mechanisms for fine sediment transport and storage that are slowly moving heavy-metal contaminated sediments from Missouri's "old lead mining district"; and increasing flood resiliency in the City of De Soto, MO.

As a professor and scientist I have contributed toward the advancement of the profession in many ways in addition to research and classroom teaching. I have mentored undergraduate students, graduate students, post-doctoral fellows, and junior colleagues. For example, I have served on the thesis or dissertation committees of over 100 graduate students at over 10 universities worldwide. I have provided approximately 20 evaluations for hiring, tenure, and promotion at national and international research universities. I have provided technical reviews for over 240 journal publications and research proposals.

Finally, I consider my philanthropic work as a founding board member of the PADI Foundation as a significant professional accomplishment. Since 1991 I have actively participated in the awarding of over $ 4 million in grants to approximately 1000 recipients and projects.

## Academic and Professional Activity Details

**Formal Course Instruction**: Nearshore Processes; Laboratory in Coastal Processes; Laboratory and Field Measurement Techniques; Ocean Waves: Linear; Ocean Waves: Laboratory; Mechanics of Coastal Sediment Transport; Data Analysis Techniques; Surface Water Hydrology; Environmental Issues; Introduction to Environmental Science; Introduction to Environmental Science Laboratory; Fundamentals of Environmental Science, Fundamentals of Environmental Science Laboratory, Geosciences Journal Club; Environmental Sciences Seminar; Rivers Seminar, Coastal Geomorphology; Transport and Mixing in the Environment, Geomorphology .

**M.S. Committee Chairman (20):** T. Tamura, 1986; E. Gonzales, 1988; K. Ludwig, 1989; S. Tyagi, 1990, J. McCardle, 1993; P. Dompe, 1993; T. Mason, 1993; C. Jette, 1994; E. Thosteson, 1995; D. Stubbs, 1995; K. Marusin, 1995; M. Krecic, 1995; C. Lee, 1996; V. Zakirov, 1997; V. Alymov, 1999; H. Qin, 1999; E. Cranston 2000; O. Mouraenko, 2001; Annika Gomell, 2015, Julia Hunter, 2018.

**Ph.D. Committee Chairman (5):** T. Lee, 1994; J. Lee (Co-chairman), 1994; C. Jette, 1997; E. Thosteson, 1997; Y. Chang, 2001.

**External or International Ph.D. External Examiner (4)**: I. Teackle, Queensland University, Australia, 2006; S. Kularatne, Univ West. Australia, 2006; F. M. Sterlini, University Twente, The Netherlands, 2009, Sylvia Rodriguez-Abudo, The University of New Hampshire, 2014.

**Post-doctoral Advisor (10):** Erdman, M. R., 1989-1990; Dick, J. E., 1990; Karangaonkar, T, 1990-1991; Gu, Z., 1990-1991, N. Wikramanayake, 1994; E. Thosteson, 1998; H. Liu, 2001-2002, P. Barnard, 2003-2005, L. Erikson 2006-2008; Adam J. Pearson, 2015-2017.

**Administrative and other University committees**:

Engineering library services advisory committee, University of Florida, 1989-1990, 1993-1997.
Ad Hoc committee on Ph.D. Program, Department of Coastal and Oceanographic Engineering, University of Florida, 1990.
Graduate Coordinator, Department of Coastal and Oceanographic Engineering, University of Florida, 1991-1993.
Faculty teaching and advising awards committee, College of Engineering, University of Florida, 1993, 1994, 1995.
Chair, search committee, faculty member in Mechanical Engineering, 1996-1997.
Senate Member, University of Florida, 1999-2001
Weil Hall Renovation and Space Committee, University of Florida, 1999-2001
Chair, search committees, two faculty searches in Coastal and Oceanographic Engineering, University of Florida, 2000-2001.
Chair, search committee, faculty search in Earth and Atmospheric Sciences, Saint Louis University, 2012, 2013, 2015.
Rank and Tenure committee member, Arts and Sciences, Saint Louis University, 2013-15
Rank and Tenure committee member, Center for Sustainability, Saint Louis Univ., 2014-16
Ritter Hall renovation and space committee, 2015-2016

***Major Experiment Participation:*** Torrey Pines, CA**,** Nearshore Sediment Transport Study (NSTS), 1977; Santa Barbara, CA, NSTS, 1980; Pt. Sapin, New Brunswick, Canadian Coastal Sediment Study ($C^2S^2$), 1983; Stanhope Lane, Prince Edward Island, $C^2S^2$, 1984; Cape Canaveral, FL, 1988; Supertank, 1990; Vilano Beach, FL 1991; Duck, NC, DUCK'94 1994; SIS95, Duck, NC, 1995; SIS96, Duck, NC, 1996; SANDYDUCK, Duck, NC, 1997; SISTEX99, 1999; South Carolina Coastal Erosion Study, 2003-2005; SAX04/Ripple DRI, Fort Walton Beach, FL 2004; San Francisco Bight Sediment Processes Study, 2004-2008. Crissy Marsh Coastal Processes Study, 2007-2009.

***Editorial Boards***: *Marine Geology*,1989-2009; Assistant Editor, *A.S.C.E. Journal of Waterway, Port, Coastal & Ocean Engineering*, 2000-2001. Reviewer of approximately 240 journal articles and proposals.

***Member or past member***: Acoustic Society of America, American Geophysical Union Lifetime Member, American Shore and Beach Preservation Association, American Society of Civil Engineers, Coastal and Estuarine Research Foundation, Florida Shore and Beach Preservation Association, Geologic Society of America, International Association for Hydraulic Research, Sigma Xi

***Board of Directors***: PADI Foundation, 1991 to present.

***Patent*****:** No. 5,022,784: "Undertow reduction system for shoreline protection", 11 June 1991.

**River management review panel:** Member of the SEDS-PEP III panel that evaluated the research and development efforts of the Grand Canyon Monitoring and Research Center for the monitoring of sediment resources of the Colorado River system in the Grand Canyon, 2005-2006.

***Consultant*****:**
Expert witness on nearshore hydrodynamics, surf zone safety, and small boat accidents.
Coastal erosion, sediment management, and coastal construction permitting.
Instrument development and industrial applications of particle science and technology.
Sustainable coasts, waterfronts, and watersheds.
Reader and assessment development, advanced placement test for environmental science
Development of community flood resilience

***Community Service:***
Judge: High School Science and Engineering Fairs.
Coach: Youth sports.
STARS (Students and Teachers as Researchers) advisor.
Participant: Florida and California coastal clean up; Missouri Operation Clean Stream.
Award: U. S. Lifesaving Association.
Thriving Earth Exchange Expert Scientist, American Geophysical Union
Promotion of the PADI Foundation

***Invited Lectures:***
Second Canadian Coastal Sediment Study Workshop, Halifax, Nova Scotia, 9-10 May 1985.
University of Southampton, 22 October 1985.
University of Chicago, 2 June 1986.
University of California at San Diego, 5 January 1989.
Louisiana State University, 2 March 1989.
U.S. Army Coastal Engineering Research Center, 3 March 1989.
University of South Florida, 6 April 1989
Fall Meeting, American Geophysical Union, 4-8 December, 1989.
Florida Institute of Technology, 21 February, 1990.
Institute of Water and Environmental Problems, Novosibirsk, Russia, 1990.
Acoustic Society of America, New Orleans, LA, 30 October 1992.
Texas A&M University, 1994.
University of East Anglia, Norwich, United Kingdom, 1995.
Laboratoire Central des Ponts et Chaussees, Paris, France, 3 July 1997.
University of Rennes, Rennes, France, 7 July 1997.
Institute of Water and Environmental Problems, Novosibirsk, Russia, NATO expert visit, 1998.
University of Waikato, Hamilton, New Zealand, 1998.
Auckland University, Auckland, New Zealand, 1998.
Nearshore Research Workshop, St. Petersburg, FL, 1998.
University of South Florida, St. Petersburg, FL, 1999.
AGU/ASLO Ocean Sciences Meeting, Honolulu, 2002.
Visiting Professor, Queensland University, Brisbane, Australia, 2003.
Proudman Oceanographic Laboratory, Bidston, United Kingdom, 2003.
Newton Institute of Mathematical Physics, Cambridge, England, 2003.
University of South Carolina, 2004.
Stanford University, 2006.
AGU/ASLO Ocean Science Meeting, Honolulu, 2006.
California Institute of Technology, 2006.
University of California, Los Angeles, 2006.
AGU Fall meeting, San Francisco, 2006.
San Francisco Estuary Institute, 2008.
AGU/ASLO Ocean Science Meeting, Orlando, 2008.
Duke University, 2008.
Saint Louis University, 2011.
Washington University in St. Louis, 2011.
University of Illinois, Champaign-Urbana, 2012.
Colorado State University, 2013.
New Jersey Institute of Technology, 2013.
Kavli Institute of Theoretical Physics, 2013.

Particles in Europe, 2014.
River Flow, The Eighth International Conference on Fluvial Hydraulics, 2016.
Ozarks Environmental and Water Resources Institute, Missouri State University, 2017
University of Queensland, Australia, 2017
Air and Waste Management Association, St. Louis Section, 2019
Korea Institute of Ocean Science and Technology, 2021

## List of Publications

### ***Book Chapters and Books edited***:

The Sea, Volume 9: Ocean Engineering Science, B. Le Mehaute and D. M. Hanes, Co-editors, J. Wiley and Sons, New York, 1301 pages, 1990.

The Shores of Seas, Natural, and Man-Made Lakes , A. Khabidov, A. Zhindarev, D.M. Hanes, et al., Co-editors, Siberian Branch of the Russian Academy of Sciences Publishers, Novosibirsk, 1999, 271 p. (in Russian).

Vincent, C.E., D.M. Hanes, C.M. Dohmen-Janssen, C. Obhrai, G. Klopman, S.R. McLean and Ribberink, J.S., (1999). The suspension of sand in a large wave flume (SISTEX99). In The Shores of Seas, Natural, and Man-Made Lakes Eds A. Khabidov, D.M.Hanes et al., Siberian Branch of the Russian Academy of Sciences Publishers, Novosibirsk, 271 p. (in Russian).

Ribberink, J.S., C.M. Dohmen-Janssen, D.M. Hanes, S.R. McLean and C.E. Vincent, 2001. Wave-induced sand transport processes in a large scale wave channel. In: Coastal Zone of Seas, Lakes and Man-Made Lakes , V.P. Chichagov (Ed.), Russian Academy of Sciences, Siberian Branch, Inst. for Water and Environmental problems, Novosibirsk, "Nauka", 2001, pp. 139-154 (in Russian).

Vincent, C.E., D.M. Hanes, C.M. Dohmen-Janssen, G. Klopman, S.R. McLean, C. Obhrai and Ribberink, J.S., 2001. The suspension of sand in a large wave flume (SISTEX99). In: Coastal Zone of Seas, Lakes and Man-Made Lakes , V.P. Chichagov (Ed.), Russian Academy of Sciences, Siberian Branch, Inst. for Water and Environmental problems, Novosibirsk, "Nauka", 2001, pp. 155-165 (in Russian).

Constantinescu, G., M. Garcia, and D. Hanes, 2016, Proceedings of the International Conference on Fluvial Hydraulics (River Flow 2016), St. Louis, USA, 11-14 July 2016, CRC Press, Taylor & Francis Group, 822 pages.

Hanes, D.M., 2021, Longshore Currents, in Treatise of Geomorphology, 2nd Edition, Elsevier, 2021.

### ***Peer-Reviewed Journal Articles***:

Seymour, R. J. and D. M. Hanes, "Performance analysis of a tethered float breakwater", *The Journal of the Waterway, Port, Coastal, and Ocean Division,* American Society of Civil Engineers, 105, WW3, 265-280, 1979.

Hanes, D. M**.** and D. L. Inman, "Observations of rapidly flowing granular-fluid materials", *Journal of Fluid Mechanics*, Vol. 150, 357-380, 1985.

Hanes, D. M. and D. L. Inman, "Experimental evaluation of a dynamic yield criterion for granular fluid flows", *Journal of Geophysical Research*, Vol. 90, No. B5, 3670-3674, 1985.

Bridge, J. S. and D. M. Hanes, "Bedload grain velocities and sediment transport rates: a correction", *Water Resources Research*, Vol. 21, No. 5, p. 775, 1985.

Hanes, D. M. and A. J. Bowen, "A granular-fluid model for steady intense bedload transport", *Journal of Geophysical Research*, Vol. 90, No. C5, 9149-9158, 1985.

Hanes, D. M. and D. A. Huntley, "Continuous measurements of suspended sand concentration in a wave dominated nearshore environment", *Continental Shelf Research*, Vol. 6, No. 4, 585-596, 1986.

Hanes, D. M., "Grain flows and bed-load sediment transport: review and extension", *Acta Mechanica*, V. 63, 131-142, 1986.

Hanes, D.M., "Correction", *Journal of Geophysical Research* –Oceans, 91 (C1): 1035-1035, 1986.

Hanes, D. M., C. E. Vincent, D. A. Huntley, and T. E. Clarke, "Acoustic measurements of suspended sand concentration in the Canadian Coastal Sediment Study experiment at Stanhope Lane, Prince Edward Island", *Marine Geology*, 81:1, 185-196, 1988.

Hanes, D. M. "Intermittent sediment suspension and its implications to sand tracer dispersal in wave-dominated environments", *Marine Geology*, 81:1, 175-183, 1988.

Hanes, D. M., J. T. Jenkins, and M. W. Richman, "The thickness of steady planes shear flows of circular disks between identical boundaries", *Journal of Applied Mechanics, ASME*, v. 55, No. 4, 969-974, 1988.

Hanes, D. M., "Geophysical Grain Flows: Report to Sponsors", Meeting Report, *Transactions, American Geophysical Union*, Vol. 71, No. 7, p. 274, 1990.

Hanes, D. M., "The structure of events of intermittent suspension of sand due to shoaling waves", Chapter 28 in The Sea, Volume 9: Ocean Engineering Science, B. LeMehaute and D.M. Hanes (Eds) , 941-952, 1990.

Ludwig, K., and D. M. Hanes, "A laboratory evaluation of optical backscatterance suspended solids sensors exposed to sand-mud mixtures", *Marine Geology*, 94, 173-179, 1990.

Vincent, C. E., D. M. Hanes, and A. J. Bowen, "Acoustic measurements of suspended sand on the shoreface and the control of concentration by bed roughness", *Marine Geology*, 96, 1-18, 1991.

Hanes, D. M., "Suspension of sand due to wave groups", *Journal of Geophysical Research*, 96, C5, 8911-8915, 1991.

Hanes, D. M., "Workshop on Geophysical Grain Flows," *Transactions, American Geophysical Union*, vol. 74, no. 43, p. 492, 1993.

Jenkins, J.T. and D.M. Hanes, "The balance of momentum and energy at an interface between colliding and freely flying grains in a rapid granular flow", Physics of Fluids A, v5, No. 3, 781-783, 1993.

Dick, J.E., M.R. Erdman, and D.M. Hanes, "Suspended sand concentration events due to shoaled waves over a flat bed", Marine Geology, 119, 67-73, 1994.

Hanes, D.M. and P. E. Dompe, "Field observations of fluctuations in coastal turbidity", Journal of Marine Environmental Engineering, Vol. 1, No. 4, 279-294, 1995.

Lee, T.H. and D.M. Hanes, "Explicit solution to the acoustic backscatter equation to measure the concentration of uniform, suspended particles", Journal of Geophysical Research, 100, C2, 2649-2657, 1995.

Lee, T.H. and D.M. Hanes, "Comparison of field observations of the vertical distribution of suspended sand and its prediction by models", Journal of Geophysical Research, 101, C2, 3561-3572, 1996.

Locurto, G., X. Zhang, V. Zakirov, R.A. Bucklin, L. Vu-Quoc, D.M. Hanes, and O.R. Walton, Soybean impacts: experiments and dynamic simulations, Transactions of the American Society of Agricultural Engineering, Vol. 40(3): 789-794, 1997.

Jette, C.D., and D.M. Hanes, High resolution sea-bed imaging: an acoustic multiple transducer array, Measurement Science and Technology, 8, 787-792, 1997.

Jenkins, J.T. and D.M. Hanes, Collisional sheet flows of sediment driven by a turbulent fluid, Journal of Fluid Mechanics, 370, 29-52, 1998.

Thosteson, E.D. and D.M. Hanes, A simplified method for determining sediment size and concentration from multiple frequency acoustic backscatter measurements, Journal Acoustic Society of America, 104 (2), 820-830, 1998.

LoCurto, G.J., R.A. Bucklin, D.M. Hanes, A.A. Teixeira, O.R. Walton, and S.H. West, Chute flow of soybeans, Transactions of the American Society of Agricultural Engineering, Vol. 42(5), 1429-1435, 1999.

Hanes, D.M. and O.R. Walton, Simulations and physical measurements of glass spheres flowing down a bumpy incline, Powder Technology, Vol 109/1-3, 134:145, 2000.

Hanes, D.M., V. Alymov, Y. Chang, and C.D. Jette, Wave formed sand ripples at Duck, North Carolina, Journal of Geophysical Research, Vol. 106, No. C10, p. 22,575, 2001.

Thorne, P.D. and D. M. Hanes, A review of acoustic methods for the study of small scale sediment transport processes, Continental Shelf Research, Vol. 22, p. 603-632, 2002.

Vincent, C.E. and D.M. Hanes, The accumulation and decay of nearbed suspended sand concentration due to waves and wave groups, Continental Shelf Research, vol 22/14, p. 1987-2000, 2002.

Dohmen-Janssen, C. M., and D. M. Hanes, Sheet flow dynamics under monochromatic nonbreaking waves, J. Geophys. Res., 107(C10), doi:10.1029/2001JC001045, 2002.

Puleo, J. A.; Holland, K. T.; Plant, N. G.; Slinn, D. N.; Hanes, D. M., Fluid acceleration effects on suspended sediment transport in the swash zone, J. Geophys. Res., Vol. 108, No. C11, doi: 10.1029/2003JC001943, 2003.

Chang, Y.S. and D.M. Hanes, Field observation and numerical investigation of the suspended sediment distribution over ripples seabeds, Journal of Geophysical Research Oceans,109, C07022, doi:10.1029/2003JC001900, 2004.

Hsu, T.J., and D.M. Hanes, The Effects of Wave Shape on Sheet Flow Sediment Transport, Journal of Geophysical Research Oceans, doi:10.1029/2003JC002075, 2004.

Puleo, J. A., O.Mouraneko, and D.M. Hanes, 1D wave bottom boundary layer comparison: specific eddy viscosity and turbulence closure models, ASCE Journal of Waterways, Port, Coastal and Ocean Division, Vol 130, No. 6, November 1, 2004.

Haas, K.A., and D.M. Hanes, Process Based Modeling of Total Longshore Sediment Transport, Journal of Coastal Research, Vol. 20, No. 3, 853-861, 2004.

Dohmen-Janssen, C.M., and D.M. Hanes, Sheet flow and suspension under wave groups in a large wave flume, Continental Shelf Research, 25, 333-347, 2005.

Puleo JA, Mouraenko O, Hanes DM, Closure to "One-dimensional wave bottom boundary layer model comparison: Specific eddy viscosity and turbulence closure models" by Jack A. Puleo, Oleg Mouraenko, and Daniel M. Hanes - Novernber/December 2004, Vol. 130, No. 6, pp. 322-325. Journal of Waterway Port Coastal and Ocean Engineering-ASCE 132 (2): 141-142 Mar-Apr, 2006.

Barnard, P., D.M. Hanes, D.M. Rubin, and R.G. Kvitek, Giant sand waves at the mouth of San Francisco Bay, EOS, V. 87, No. 29, pp 285-286, 2006.

Elfrink, B., D.M. Hanes, and G.B. Ruessink, Parameterization and simulation of near bed orbital velocities under irregular waves in shallow water, Coastal Engineering, v. 53, No. 11, 915-927, 2006.

Barnard, P.L. and Hanes, D.M., Cover Photograph: San Francisco Bay, California, U.S.A., Journal of Coastal Research, cover photograph w/ extended caption. Volume 23, No. 3. pp. ii, 2007.

Hanes, D.M. and P.L. Barnard, Morphological evolution in the San Francisco bight, Journal of Coastal Research, SI 50 (Proceedings of the 9th International Coastal Symposium), 21 – 24. Gold Coast, Australia, ISSN 0749.0208, 469-473, 2007.

Shi, F., J.T. Kirby, and D.M. Hanes, An efficient mode splitting method for a curvilinear nearshore circulation model, Coastal Engineering, V.54, p.811-824 doi:10.1016/j.coastaleng.2007.05.009, 2007.

Lacy, J.R., D.M. Rubin, H. Ikeda, K. Mokudai, and D.M. Hanes, Bedforms created by simulated waves and currents in a large flume, Journal of Geophysical Research Oceans, doi:10.1029/2006JC003942, 2007.

Haas, K.A., L. Check, and D.M. Hanes, Modeling the effects of wave skewness and beach cusps on littoral sand transport, Journal of Coastal Research, 24(4C), 141–149, DOI: 10.2112/06-0759.1, 2008.

Ji, S., Hanes, D.M., and Shen, H.H., Comparisons of Physical Experiment and Discrete Element Simulations of Rapidly Sheared Granular Materials in an Annular Shear Cell, Mechanics of Materials, doi:10.1016/j.mechmat.2009.01.029, 2009.

Sterlini, F., S. J. M. H. Hulscher, and D. M. Hanes, Simulating and understanding sand wave variation: A case study of the Golden Gate sand waves, J. Geophys. Res., 114, F02007, doi:10.1029/2008JF000999, 2009.

Hanes, D. M., Recent technologies usher in new era of coastal geomorphology research, *Eos Trans. AGU, 90*(23), 198–199, 2009.

Yu, X., Hsu, T.J., and Hanes, D.M., Sediment transport under wave groups: Relative importance between nonlinear wave shape and nonlinear boundary layer streaming, Journal of Geophysical Research: Oceans, 115, C02013, doi:10.1029/2009JC005348, 2010.

Shi, F., Hanes, D. M., Kirby, J. T., Erikson, L.H., and Barnard, P.L., Pressure-gradient-influenced nearshore circulations on an inlet-adjacent beach, Journal of Geophysical Research: Oceans, doi:10.1029/2010JC006788, 2011.

Hanes, D.M., K. Ward, and L.H. Erikson, Waves and tides responsible for the intermittent closure of the entrance to a small, sheltered tidal wetland at San Francisco, California, Continental Shelf Research, doi:10.1016/j.csr.2011.07.004, 2011.

Hanes, D.M., On the possibility of single-frequency acoustic measurement of sand and clay concentrations in uniform suspensions, Continental Shelf Research, Vol. 46, Special Issue: SI, 64-82, doi: 10.1016/j.csr.2011.10.008, 2012.

Hanes, D.M., The genesis of an inter-field marine sandwave and the associated anti-asymmetry migration of neighboring crests, Geophysical Research Letters, v. 39, L04402, doi:10.1029/2011GL050641, 2012.

Hanes, D.M., Erratum to ‘‘On the possibility of single-frequency acoustic measurement of sand and clay concentrations in uniform suspensions (Vol 46, 2012)’’, Continental Shelf Research, Vol 54, 117-118, http://dx.doi.org/10.1016/j.csr.2012.10.003, 2013.

Erikson, L.H., Wright, S., Elias, E., Hanes, D.M., Schoellhamer, D.H., and Largier, J., The use of modeling and suspended sediment concentration measurements for quantifying net suspended sediment transport through a large tidally dominated inlet, Marine Geology, http://dx.doi.org/10.1016/j.margeo.2013.06.001, 2013.

Hanes, D.M. and Erikson, L.H., The significance of ultra-refracted waves on sheltered coasts, with application to San Francisco Bay, Estuarine, Coastal, and Shelf Science, 10.1016/j.ecss.2013.08.022, 2013.

Agrawal, Y.C. and Hanes, D.M., The implications of laser-diffraction measurements of sediment size distribution in a river to the potential use of acoustic backscatter for sediment measurements, Water Resources Research, 51, doi:10.1002/2015WR017268, 2015.

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