

MS698–3: Sediment transport processes in coastal environments
Instructor: Courtney K. Harris
Spring Semester, 2003

Reading list and discussion schedule

Date	Topic	Paper
1/23	Grain size.	Drake, D.E., R. Eagenhouse, W. McArthur. 2002. Physical and chemical effects of grain aggregates on the Palos Verdes margin, southern California. <i>Continental Shelf Research</i> 22: 967–986.
1/30	BBLs	Styles, R. and S.M. Glenn, 2000. Modeling stratified combined wave-current bottom boundary layers. <i>Journal of Geophysical Research</i> 101: 24,119–139.
2/6	Bedforms	Traykovski, P., J.D. Irish, A. Hay, and J.F. Lynch. 1999. Geometry, migration, and evolution of wave orbital ripples at LEO-15. <i>Journal of Geophysical Research</i> 104: 1505–1524.
2/13	τ_{cr}	Thomsen, L. and G. Gust, 2000. Sediment erosion thresholds and characteristics of resuspended aggregates on the western European continental margin, Deep-Sea Research I, 47: 1881-1897.
2/20	Review	Problem Set 1 (due Feb. 27th at 11:30!)
2/27	Shelf	Curran, K.J., P.S. Hill, and T.G. Milligan. 2002. Fine-grained suspended sediment dynamics in the Eel River flood plume. <i>Continental Shelf Research</i> , 22(17):2537–2550.
3/13	Seabed	Bentley S, T. Keen, C. Blain, and Vaughan. 2002. The origin and preservation of a major hurricane event bed in the Northern Gulf of Mexico. <i>Marine Geology</i> , 186(3–4): 423–446.
3/20	Nearshore	Voulgaris, G. and Collins, M.B. (2000) Sediment resuspension on beaches: response to breaking waves. <i>Marine Geology</i> , 167, 167-187.
3/27	Nearshore	Elgar, Gallagher, and Guza. 2001. Nearshore sandbar migration. <i>JGR</i> 106(C6): 11,623–627.
4/3	Bioturbation	Wheatcroft, R.A. and D.E. Drake. 2003. Post-depositional alteration and preservation of sedimentary event layers on continental margins, I. The role of episodic sedimentation. <i>Marine Geology</i> (in press).

Date	Topic	Paper
4/10	Flocculation	Winterwerp. J.C. 2002. On the flocculation and settling velocity of estuarine mud. <i>Continental Shelf Research</i> 22(9): 1339–1360.
4/17	Review	Problem set 2 (due April 25th).
4/24	Timescales	Mulder, T. and J. P. M. Syvitski (1995). Turbidity currents generated at river mouths during exceptional discharges to the world oceans. <i>Journal of Geology</i> 103: 285-299. or

Other papers that were considered

Date	Topic	Paper
	Erosion	Sanford and Maa, 2001. A unified erosion formulation for fine sediments. <i>Marine Geology</i> , 129:9–23.
	Salt Marsh	Christiansen and Wiberg and Milligan. 2000. flow and sediment transport on a tidal salt marsh surface. <i>Estuarine, Coastal, and Shelf Science</i> , 50:
	Dispersal	Kineke, G., K.J. Woolfe, S.A. Kuehl, J. Milliman, T. Dellapena and R.G. Purdon, 2000. Sediment export from the Sepik River, Papua New Guinea: Evidence for a divergent dispersal system. <i>Continental Shelf Research</i> , 20:2239-2266.
	Fluid Mud	Trowbridge, J.H. and G.C. Kineke, 1994. Structure and dynamics of fluid muds over the Amazon continental shelf. <i>Journal of Geophysical Research</i> 99:865-874.
	shelf	Cacchione, Wiberg, Lynch, Irish, and Traykovski. 1999. Estimates of suspended-sediment flux and bedform activity on the inner
	Seabed	Sommerfield, C.K., Drake, D.E., and Wheatcroft, R.A. Shelf record of climatic changes in flood magnitude and frequency, north-coastal California. <i>Geology</i> , 30:5, p. 395-398.
	Nearshore	Plant, N.G., Frelich, M.F and R.A. Holman, The role of morphological feedback in surf zone sand bar response, <i>J. Geophys. Res.</i> , 106(C1), 973-989, 2001.
	Seabed	Woodruff, Geyer, and Driscoll. Hudson River paper.

last modified: February 10, 2003