

# Bibliography

- Adams, P., R. Anderson, and J. Revenaugh (2002). Microseismic measurement of wave-energy delivery to a rocky coast. *Geology* 30(10), 895–898.
- Adams, P., C. Storlazzi, and R. Anderson (2005). Nearshore wave-induced cyclical flexing in sea cliffs. *Journal of Geophysical Research* 110.
- Ahnert, F. (1976). Brief description of a comprehensive three-dimensional process-response model of landform development. *Zeitschrift fur Geomorphologie* 25, 29–49.
- Akaike, H. (1973). Information theory and an extension of the maximum likelihood principle. In F. Csáki (Ed.), *Proceedings of the 2nd International Symposium on Information Theory*, Budapest, pp. 267–281. Akadémia Kiadó.
- Alexander, L. and J. Arblaster (2009). Assessing trends in observed and modelled climate extremes over Australia in relation to future projections. *International Journal of Climatology* 29(3), 417–435.
- Alexander, L. and P. Jones (2001). Updated precipitation series for the U.K. and discussion of recent extremes. *Atmospheric Science Letters* 1(2), 142–150.
- Alexander, L., S. Tett, and T. Jonsson (2005). Recent observed changes in severe storms over the United Kingdom and Iceland. *Geophysical Research Letters* 32(13), L13704.
- Alexandersson, H., T. Schmith, K. Iden, and H. Tuomenvirta (1998). Long-term variations of the storm climate over NW Europe. *Global Atmosphere and Ocean Science* 6, 97–120.
- Allan, R., S. Tett, and L. Alexander (2009). Fluctuations in autumn-winter severe storms over the British Isles: 1920 to present. *International Journal of Climatology* 29(3), 357–371.
- Amin, S. and R. Davidson-Arnott (1997). A statistical analysis of the controls on shoreline erosion rates, Lake Ontario. *Journal of Coastal Research* 13(4), 1093–1101.
- Amos, C., G. Daborn, H. Christian, A. Atkinson, and A. Robertson (1992). In situ erosion measurements on fine-grained sediments from the Bay of Fundy. *Marine Geology* 108, 175–196.

- Aranuvachapun, S. and J. Johnson (1977). Estimating wave energy from a wave record. *Ocean Dynamics* 30(1), 26–30.
- Armitage, J., R. Duller, A. Whittaker, and P. Allen (2011). Transformation of tectonic and climatic signals from source to sedimentary archive. *Nature Geoscience* 4(4), 231–235.
- Arnell, N. (2004). Climate-change impacts on river flows in Britain: The UKCIPO2 scenarios. *Water and Environment Journal* 18(2), 112–117.
- Arnell, N. (2011). Uncertainty in the relationship between climate forcing and hydrological response in UK catchments. *Hydrology and Earth System Sciences* 15, 897–912.
- Arulanandan, K., E. Gillogley, and R. Tully (1980). Development of a quantitative method to predict critical shear stress and rate of erosion of natural undisturbed cohesive soils. Technical report, U.S. Army Corps of Engineers Waterway Experiment Station, Vicksburg, Miss.
- Attal, M., G. Tucker, A. Whittaker, P. Cowie, and G. Roberts (2008). Modeling fluvial incision and transient landscape evolution: Influence of dynamic channel adjustment. *Journal of Geophysical Research* 113.
- Bagnold, R. (1966). An approach to the sediment transport problem from general physics. *Professional Paper of the U.S. Geological Survey.*, 422–1.
- Baptista, P., L. Bastos, C. Bernardes, T. Cunha, and J. Dias (2008). Monitoring sandy shores morphologies by DGPS – A practical tool to generate digital elevation models. *Journal of Coastal Research* 24(6), 1516–1528.
- Baptista, P., T. Cunha, C. Bernardes, C. Gama, O. Ferreira, and A. Dias (2011). A precise and efficient methodology to analyse the shoreline displacement rate. *Journal of Coastal Research* 27(2), 223–232.
- Bärring, L., L. Barring, and H. Von Storch (2004). Scandinavian storminess since about 1800. *Geophysical Research Letters* 31(20), L20202.
- Bates, P. and A. De Roo (2000). A simple raster based model for flood inundation simulation. *Journal of Hydrology* 236, 54–57.
- Belov, A., P. Davies, and A. Williams (1999). Mathematical modeling of basal coastal cliff erosion in uniform strata: A theoretical approach. *The Journal of Geology* 107(1), 99–109.
- Benumof, B., C. D. Storlazzi, R. Seymour, and G. Griggs (2000). The relationship between incident wave energy and seacliff erosion rates: San Diego County, California. *Journal of Coastal Research* 16(4), 1162–1178.

- Berlin, M. and R. Anderson (2007). Modeling of knickpoint retreat on the Roan Plateau, western Colorado. *Journal of Geophysical Research* 112(F3), F03S06.
- Berlin, M. and R. Anderson (2009). Steepened channels upstream of knickpoints: Controls on relict landscape response. *Journal of Geophysical Research* 114(F3), F03018.
- Beven, K. (1996). Equifinality and uncertainty in geomorphological modelling. In B. Rhoads and C. Thorn (Eds.), *The Scientific Nature of Geomorphology: Proceedings of the 27th Binghampton Symposium in Geomorphology*, Chapter 12, pp. 289–313. Chichester: John Wiley & Sons, Ltd.
- Beven, K. (2009). *Environmental Modelling: An Uncertain Future?* Abingdon: Routledge.
- Beven, K. and M. Kirkby (1979). A physically based variable contributing area model of basin hydrology. *Hydrological Society Bulletin* 24(1), 43–69.
- Bishop, P. (2007). Long-term landscape evolution: linking tectonics and surface processes. *Earth Surface Processes and Landforms* 32(3), 329–365.
- Bishop, P., T. Hoey, J. Jansen, and I. Artza (2005). Knickpoint recession rate and catchment area: the case of uplifted rivers in Eastern Scotland. *Earth Surface Processes and Landforms* 30(6), 767–778.
- Bledsoe, B. P., C. C. Watson, and D. S. Biedenharn (2002). Quantification of incised channel evolution and equilibrium. *Journal of the American Water Resources Association* 38(3), 861–870.
- Blenkinsop, S. and H. Fowler (2007). Changes in drought frequency, severity and duration for the British Isles projected by the PRUDENCE regional climate models. *Journal of Hydrology* 342(1-2), 50–71.
- Bonan, G., K. Oleson, M. Vertenstein, S. Levis, X. Zeng, Y. Dai, R. Dickinson, and Z.-L. Yang (2002). The land surface climatology of the Community Land Model coupled to the NCAR Community Climate Model. *Journal of Climate* 15(22), 3123–3149.
- Box, G., W. Hunter, and J. Hunter (1987). *Statistics for experimenters: An introduction to design, data analysis, and model building*. New York: John Wiley & Sons.
- Bras, R. L., G. E. Tucker, and V. Teles (2003). Six myths about mathematical modelling in geography. *Geophysical monograph* 135, 63–79.
- Brasington, J. and K. Richards (2007). Reduced-complexity, physically-based geomorphological modelling for catchment and river management. *Geomorphology* 90(3-4), 171–177.

- Braun, J. and M. Sambridge (1997). Modelling landscape evolution on geological time scales: a new method based on irregular spatial discretization. *Basin Research* 9, 27–52.
- Bray, M. and J. Hooke (1997). Prediction of soft-cliff retreat with accelerating sea-level rise. *Journal of Coastal Research* 13(2), 453–467.
- Bridge, J. and D. Dominic (1984). Bed-load grain velocities and sediment transport rates. *Water Resources Research* 20(4), 476 – 490.
- Bristow, H. (1889). *The geology of the Isle of Wight* (2nd ed.). London: HMSO.
- Brooks, S. and T. Spencer (2010). Temporal and spatial variations in recession rates and sediment release from soft rock cliffs, Suffolk coast, UK. *Geomorphology* 124(1-2), 26–41.
- Brooks, S. and T. Spencer (2012, January). Shoreline retreat and sediment release in response to accelerating sea level rise: Measuring and modelling cliffline dynamics on the Suffolk Coast, UK. *Global and Planetary Change* 80-81(null), 165–179.
- Brooks, S.M., S. T. and S. Boreham (2012). Deriving mechanisms and thresholds for cliff retreat in soft-rock cliffs under changing climates: Rapidly retreating cliffs of the Suffolk coast, UK. *Geomorphology* 153-154, 48–60.
- Browne, G. and T. Naish (2003). Facies development and sequence architecture of a late Quaternary fluvial-marine transition, Canterbury Plains and shelf, New Zealand: implications for forced regressive deposits. *Sedimentary Geology* 158(1 - 2), 57 – 86.
- Brunsdon, D. (1974). The degradation of a coastal slope, Dorset, England. Volume 7, pp. 79–98. Institute of British Geography Special Publication.
- Brunsdon, D. and D. Jones (1980). Relative time scales and formative events in coastal landslide systems. *Zeitschrift geomorph. N.F. Supplement Band 34*, 1–19.
- Brunsdon, D. and E. Lee (2004). Behaviour of coastal landslide systems: an inter-disciplinary view. *Zeitschrift fur Geomorphologie* 134, 1–112.
- Bruun, P. (1962). Sea-Level rise as a cause of shore evolution. *Journal of Waterways and Harbours Division ASCE* 88, 117–130.
- Bucknam, R. and R. Anderson (1979). Estimation of fault-scarp ages from a scarp-height-slope-angle relationship. *Geology* 7, 11–14.
- Bull, L. and M. Kirkby (1997, September). Gully processes and modelling. *Progress in Physical Geography* 21(3), 354–374.
- Burkard, M. and R. Kostaschuk (1995). Initiation and evolution of gullies along the shoreline of Lake Huron. *Geomorphology* 14(3), 211–219.

- Burton, A., H. Fowler, S. Blenkinsop, and C. Kilsby (2010). Downscaling transient climate change using a Neyman-Scott Rectangular Pulses stochastic rainfall model. *Journal of Hydrology* 381(1-2), 18–32.
- Bury, H. (1920). The chines and cliffs of Bournemouth. *Geological Magazine* 57, 71–76.
- Caers, J. (2011). *Modelling uncertainty in the Earth sciences*. Chichester: Wiley.
- Callaghan, D., P. Nielsen, A. Short, and R. Ranasinghe (2008). Statistical simulation of wave climate and extreme beach erosion. *Coastal Engineering* 55(5), 375–390.
- Carnell, R., C. Senior, and J. Mitchell (1996). An assessment of measures of storminess: simulated changes in northern hemisphere winter due to increasing CO<sub>2</sub>. *Climate Dynamics* 12, 467–476.
- Carson, M. and M. Kirkby (1972). *Hillslope form and process*. Cambridge: Cambridge University Press.
- Carter, D. and P. Challenor (1981). Estimating return values of environmental variables. *Quarterly Journal of the Royal Meteorological Society* 107, 259 – 266.
- Castedo, R., W. Murphy, J. Lawrence, and C. Paredes (2012, July). A new processâ€¢response coastal recession model of soft rock cliffs. *Geomorphology* 117 - 118, 128 – 143.
- Charlton, R. (2008). *Fundamentals of fluvial geomorphology*. London: Routledge.
- Chen, M.-H. and Q. M. Shao (1998). Monte Carlo estimation of Bayesian credible and HPD intervals. *Journal of Computational Graphics and Statistics* 8, 69 – 92.
- Cheney, E. and D. Kincaid (1999). *Numerical mathematics and computing* (4th ed.). California: Brooks/Cole publishing.
- Christensen, J. and O. Christensen (2007). A summary of the PRUDENCE model projections of changes in European climate by the end of this century. *Climatic Change* 81, 7–30.
- Chu, J. and P. Yu (2010). A study of the impact of climate change on local precipitation using statistical downscaling. *Journal of Geophysical Research* 115(D10), D10105.
- Ciavola, P., C. Armaroli, J. Chiggiato, A. Valentini, M. Deserti, L. Perini, and P. Luciani (2007). Impact of storms along the coastline of Emilia-Romagna: the morphological signature of the Ravenna coastline (Italy). *Journal of Coastal Research* (Special Issue 50).
- Clarke, M. and H. Rendell (2009). The impact of North Atlantic storminess on western European coasts: A review. *Quaternary International* 195(1-2), 31–41.

- Clevis, Q., G. Tucker, S. Lancaster, A. Desitter, N. Gasparini, and G. Lock (2006). A simple algorithm for the mapping of TIN data onto a static grid: Applied to the stratigraphic simulation of river meander deposits. *Computers & Geosciences* 32(6), 749–766.
- Coles, S. (2001). *An introduction to Statistical Modelling of Extreme Values*. London: Springer.
- Coles, S., L. Rau, and S. Sisson (2003, March). A fully probabilistic approach to extreme rainfall modeling. *Journal of Hydrology* 273(1-4), 35–50.
- Cooper, J. and O. Pilkey (2004). Sea-level rise and shoreline retreat: time to abandon the Bruun Rule. *Global and Planetary Change* 43(3-4), 157–171.
- Corte-Real, J., B. Qian, and H. Xu (1999). Circulation patterns, daily precipitation in Portugal and implications for climate change simulated by the second Hadley Centre GCM. *Climate Dynamics* 15, 921–935.
- Coulthard, T. (2001). Landscape evolution models: a software review. *Hydrological Processes* 15(1), 165–173.
- Coulthard, T., D. Hicks, and M. Van De Wiel (2007). Cellular modelling of river catchments and reaches: Advantages, limitations and prospects. *Geomorphology* 90(3-4), 192–207.
- Coulthard, T., M. Kirkby, and M. Macklin (1998). Non-linearity and spatial resolution in a cellular automaton model of a small upland basin. *Hydrology and Earth System Sciences* 2(2-3), 257–264.
- Coulthard, T., M. Kirkby, and M. Macklin (2000). Modelling geomorphic response to environmental change in an upland catchment. *Hydrological Processes* 14, 2031–2045.
- Coulthard, T., J. Lewin, and M. Macklin (2005). Modelling differential catchment response to environmental change. *Geomorphology* 69, 222–241.
- Coulthard, T. and M. Macklin (2001). How sensitive are river systems to climate and land-use changes? A model-based evaluation. *Journal of Quaternary Science* 16(4), 347–351.
- Coulthard, T., M. Macklin, and M. Kirkby (2002). A cellular model of Holocene upland river basin and alluvial fan evolution. *Earth Surface Processes and Landforms* 27, 269–288.
- Coulthard, T., J. Ramirez, H. Fowler, and V. Glenis (2012). Using the UKCP09 probabilistic scenarios to model the amplified impact of climate change on river basin sediment yield. *Hydrology and Earth System Sciences* 9, 8799–8840.
- Cox, D. (1962). *Renewal Theory*. London: Methuen.

- Crosby, B. and K. Whipple (2006). Knickpoint initiation and distribution within fluvial networks: 236 waterfalls in the Waipaoa River, North Island, New Zealand. *Geomorphology* 82(1-2), 16–38.
- Culling, W. (1963). Soil creep and the development of hillside slopes. *Journal of Geology* 71 (127-161).
- Daley, B. and A. Insole (1984). *The Isle of Wight*. London: The Geologist's Association.
- Damgaard, J. and P. Dong (2004). Soft cliff recession under oblique waves: Physical model tests. *Journal of Waterway, Port, Coastal, and Ocean Engineering* 130(5), 234–242.
- Darby, S. (1998). Modelling width adjustment in straight alluvial channels. *Hydrological Processes* 12(8), 1299–1321.
- Darby, S., H. Trieu, P. Carling, J. Sarkkula, J. Koponen, M. Kummu, I. Conlan, and J. Leyland (2010). A physically based model to predict hydraulic erosion of fine-grained riverbanks: The role of form roughness in limiting erosion. *Journal of Geophysical Research* 115(F4), 1–20.
- Dargie, T. (1996). Cliffs and cliff-top vegetation. In J. Doody and N. Davidson (Eds.), *Coasts and seas of the United Kingdom. Region 9 Southern England: Hayling Island to Lyme Regis* (Coastal Di ed.).
- Davis, W. (1899). The geographic cycle. *Geography Journal* 38(1-27), 136–158.
- De Vriend, H., J. Zyberman, J. Nicholson, J. Roelvink, P. Pechon, and H. Southgate (1993). Medium-term 2dh coastal modelling. *Coastal Engineering* 21, 193–224.
- Dearing, J., N. Richmond, A. Plater, J. Wolf, D. Prandle, and T. Coulthard (2006). Modelling approaches for coastal simulation based on cellular automata: the need and potential. *Philosophical transactions. Series A, Mathematical, physical, and engineering sciences* 364(1841), 1051–71.
- Delworth, T., A. Broccoli, A. Rosati, R. Stouffer, V. Balaji, J. Beesley, W. Cooke, K. Dixon, J. Dunne, K. A. Dunne, J. Durachta, K. Findell, P. Ginoux, A. Gnanadesikan, C. T. Gordon, S. Griffies, R. Gudgel, M. Harrison, I. Held, R. Hemler, L. Horowitz, S. Klein, T. Knutson, P. Kushner, A. Langenhorst, H.-C. Lee, S.-J. Lin, J. Lu, S. L. Malyshev, P. Milly, V. Ramaswamy, J. Russell, M. Schwarzkopf, E. Shevliakova, J. Sirutis, M. Spelman, W. Stern, M. Winton, A. Wittenberg, B. Wyman, F. Zeng, and R. Zhang (2006, March). GFDL's CM2 global coupled climate models. Part I: formulation and simulation characteristics. *Journal of Climate* 19(5), 643–674.
- Densmore, A., M. Ellis, and R. Anderson (1998). Landsliding and the evolution of normal-fault-bounded mountains. *Journal of Geophysical Research* 103, 203–219.

- Diaz-Nieto, J. and R. Wilby (2005). A comparison of statistical and climate change factors methods: Impacts on low flows in the River Thames, United Kingdom. *Climatic Change* 69, 245–268.
- DiBiase, R. and K. Whipple (2011, December). The influence of erosion thresholds and runoff variability on the relationships among topography, climate, and erosion rate. *Journal of Geophysical Research* 116(F4).
- Dibike, Y. and P. Coulibaly (2005). Hydrologic impact of climate change in the Saguenay watershed: comparison of downscaling methods and hydrologic models. *Journal of Hydrology* 307(1-4), 145–163.
- Dickson, M. and R. Pentney (2012). Micro-seismic measurements of cliff motion under wave impact and implications for the development of near-horizontal shore platforms. *Geomorphology* 151 - 152, 27 – 38.
- Dickson, M., M. Walkden, and J. Hall (2006). Modelling the impacts of climate change on an eroding coast over the 21 st Century. *Tyndall Centre for Climate Change Research Working Paper* 103, 1–28.
- Dickson, M., M. Walkden, and J. Hall (2007). Systemic impacts of climate change on an eroding coastal region over the twenty-first century. *Climatic Change* 84(2), 141–166.
- Dietrich, W., D. Bellugi, A. Heimsath, J. Roering, L. Sklar, and J. Stock (2003). Geomorphic transport laws for predicting landscape form and dynamics. In P. R. Wilcock and R. Iversen (Eds.), *Prediction in Geomorphology*, pp. 103 – 132. Washington D.C.: AGU.
- Dietrich, W. and T. Dunne (1993). The channel head. In K. Beven and M. J. Kirkby (Eds.), *Channel network hydrology*, pp. 175–219. London: J. Wiley and Sons.
- Dodd, N., A. Stoker, R. Garnier, G. Vittori, F. de los Santos, M. Brocchini, L. Soldini, and M. Losada (2008). Use of numerical models to study land-based sedimentation and subsequent nearshore morphological evolution. *Coastal Engineering* 55(7-8), 601–621.
- Donat, M., D. Renggli, S. Wild, L. Alexander, G. Leckebusch, and U. Ulbrich (2011). Reanalysis suggests long-term upward trends in European storminess since 1871. *Geophysical Research Letters* 28, L14703.
- Dong, P. and F. Guzzetti (2005). Frequency-Size Statistics of Coastal Soft-Cliff Erosion. *Journal of Waterway, Port, Coastal, and Ocean Engineering* 131(1), 37–42.
- Donovan, B. and R. Wilby (2003). Downscaling future wave heights and tidal surges for the North Sea coast. In *European Geophysical Union*, Nice, France.
- Dorsch, W., T. Newland, D. Tassone, S. Tymons, and D. Walker (2008). A statistical approach to modelling the temporal patterns of ocean storms. *Journal of Coastal Research* 24(6), 1430–1438.

- Dubrovský, M. (1997). Creating Daily Weather Series with Use of the Weather Generator. *Environmetrics* 8(5), 409–424.
- Eagleson, P. (1978). Climate, soil and vegetation: 2. the distribution of annual precipitation derived from observed storm sequences. *Water Resources Research* 14, 713 – 721.
- Easterling, D. (2000). Climate extremes: Observations, modeling, and impacts. *Science* 289(5487), 2068–2074.
- Edil, T. and B. Haas (1980). Proposed criteria for interpreting stability of lakeshore bluffs. *Engineering Geology* 16, 97–110.
- Ekstrom, M., H. Fowler, C. Kilsby, and P. Jones (2005). New estimates of future changes in extreme rainfall across the UK using regional climate model integrations. 2. Future estimates and use in impact studies. *Journal of Hydrology* 300(1-4), 234–251.
- Emery, K. and G. Kuhn (1982). Sea cliffs: their processes, profiles, and classification. *Bulletin of the Geological Society of America* 93(7), 644.
- Englefield, H. (1816). *A description of the principle picturesque beauties, antiquities and geological phenomena of the Isle of Wight. With additional observations on the strata of the island, and their continuation in the adjacent parts of Dorsetshire*. London: Payne and Foss.
- Erskine, W. (2005). Gully Erosion. In J. Lehr and J. Keeley (Eds.), *Water encyclopedia: Surface and agricultural water*, pp. 183–188. Hoboken: Wiley-Interscience.
- EUROSION (2004). Living with coastal erosion: sediment and space for sustainability. Major findings and policy recommendations of the EUROSION project.
- Evans, E., J. Simm, C. Thorne, N. Arnell, R. Ashley, T. Hess, S. Lane, J. Morris, R. Nicholls, E. Penning-Rowsell, N. Reynard, A. Saul, S. Tapsell, A. Watkinson, and H. Wheater (2008). An update on the Foresight Future Flooding 2004 Qualitative Risk Analysis.
- Everts, C. H. (1991). Seaciff retreat and coarse sediment yields in southern California. *Coastal Sediments'91 (American Society of Civil Engineers)* 2, 1586–1598.
- Fernandes, N. and W. Dietrich (1997). Hillslope evolution by diffusive processes; the timescale for equilibrium adjustments. *Water Resources Research* 33, 1307–1318.
- Ferreira, O. (2005). Storm groups versus extreme single storms: predicted erosion and management consequences. *Journal of Coastal Research* (Special Issue 42), 221–227.
- Field, C., V. Barros, T. Stocker, D. Qin, K. Dokken, K. Ebi, M. Mastrandrea, K. Mach, G.-K. Plattner, M. Allen, M. Tignor, and P. Midgley (2012). Summary for policy makers. In *Managing risks of extreme events and disasters to advance climate change*

- adaptation. A special report of working groups I and II of the Intergovernmental Panel on Climate Change., pp. 1–19. Cambridge, UK and New York, NY, USA: Cambridge University Press.
- Fitton, W. (1836). On the strata below the chalk. *Transactions of the Geological Society of London Series 2*(4).
- Flather, R., T. Baker, P. Woodworth, and I. Vassie (2001). Integrated effects of climate change on coastal extreme sea levels. Technical Report 140, Proudman Oceanographic Laboratory, Liverpool.
- Flato, G. and G. Boer (2001). Warming asymmetry in climate simulations. *Geophysical Research Letters* 28, 195–198.
- Flint, K. E. (1982). Chines on the Isle of Wight: channel adjustment and basin morphology in relation to cliff retreat. *Geographical Journal* 148(2), 225–236.
- Flores-Cervantes, J., E. Istanbulluoglu, and R. Bras (2006). Development of gullies on the landscape: A model of headcut retreat resulting from plunge pool erosion. *Journal of Geophysical Research* 111(F1).
- Fowler, H., S. Blenkinsop, and C. Tebaldi (2007). Linking climate change modelling to impacts studies: recent advances in downscaling techniques for hydrological modelling. *International Journal of Climatology* 27(12), 1547–1578.
- Fowler, H. and M. Ekström (2009). Multi-model ensemble estimates of climate change impacts on UK seasonal precipitation extremes. *International Journal of Climatology* 29(3), 385–416.
- Fowler, H., M. Ekström, S. Blenkinsop, and A. Smith (2007). Estimating change in extreme European precipitation using a multimodel ensemble. *Journal of Geophysical Research* 112(D18), D18104.
- Fowler, H., M. Ekström, C. Kilsby, and P. Jones (2005). New estimates of future changes in extreme rainfall across the UK using regional climate model integrations. 1. Assessment of control climate. *Journal of Hydrology* 300, 212–233.
- Frankl, A., J. Nyssen, M. De Dapper, M. Haile, P. Billi, R. N. Munro, J. Deckers, and J. Poesen (2011). Linking long-term gully and river channel dynamics to environmental change using repeat photography (Northern Ethiopia). *Geomorphology* 129(3-4), 238–251.
- Frei, C., J. H. Christensen, M. Deque, D. Jacob, R. G. Jones, and P. L. Vidale (2003). Daily precipitation statistics in regional climate models: evaluation and intercomparison for the European Alps. *Journal of Geophysical Research* 108(4124).
- Frei, C. and C. Schär (2001). Detection probability of trends in rare events: Theory and application to heavy precipitation in the Alpine region. *Journal of Climate* 14(7), 1568–1584.

- Frei, C., R. Scholl, S. Fukutome, J. Schmidli, and P. Vidale (2006). Future change of precipitation extremes in Europe: an intercomparison of scenarios from Regional Climate Models. *Journal of Geophysical Research - Atmospheres* 111, D06105.
- Füssel, H. (2009). An updated assessment of the risks from climate change based on research published since the IPCC Fourth Assessment Report. *Climatic Change* 97(3), 469–482.
- Gardner, J. (1879). *Geology of the Isle of Wight* (2nd ed.). London: HMSO.
- Gardner, T. W. (1983). Experimental study of knickpoint and longitudinal profile evolution in cohesive, homogeneous material. *Geological Society of America Bulletin* 94(5), 664–672.
- Gasparini, N., R. Bras, and G. Tucker (2008). Numerical predictions of the sensitivity of grain size and channel slope to an increase in precipitation. In S. Rice, A. Roy, and B. Rhoads (Eds.), *River confluences, tributaries and the fluvial network*. John Wiley & Sons.
- Gasparini, N., G. Tucker, and R. Bras (1999). Downstream fining through selective particle sorting in an equilibrium drainage network. *Geology* 27(12), 1079–1082.
- Gasparini, N., G. Tucker, and R. Bras (2004). Network-scale dynamics of grain-size sorting: implications for downstream fining, stream profile concavity and drainage basin morphology. *Earth Surface Processes and Landforms* 29, 401–421.
- Gasparini, N., K. Whipple, and R. Bras (2007). Predictions of steady state and transient landscape morphology using sediment-flux-dependent river incision models. *Journal of Geophysical Research* 112.
- Gelinas, P. and R. Quigley (1973). The influence of geology on erosion rates along the north shore of Lake Erie. In *Proceedings of the 16th Conference of Great Lakes Research*, pp. 421 – 430.
- Gervais, M., Y. Balouin, and R. Belon (2012). Morphological response and coastal dynamics associated with major storm events along the Gulf of Lions Coastline, France. *Geomorphology* 143-144, 69–80.
- Ghosh, S. (2010). SVM-PGSL coupled approach for statistical downscaling to predict rainfall from GCM output. *Journal of Geophysical Research* 115(D22), D22102.
- Giorgi, F., B. Hewiston, J. Christensen, M. Hulme, H. Von Storch, P. Whetton, R. Jones, L. Mearns, and C. Fu (2001). Regional climate information - evaluation and projections. In J. Houghton, Y. Ding, D. Griggs, M. Nouger, P. van der Linden, and D. Xiaosu (Eds.), *Climate Change 2001: The Scientific Basis*, pp. 583–638. Cambridge: Cambridge University Press.

- Goda, Y. (2000). Random seas and design of maritime structures. In P.-F. Liu (Ed.), *Advanced series on Ocean Engineering*, pp. 443. World Scientific.
- Goldstein, N., C. Dietzel, and K. Clarke (2005). Don't stop till you get enough - Sensitivity testing of Monte Carlo iterations for model calibration. In *Proceedings of the 8th International Conference on GeoComputation, University of Michigan*.
- Gordon, C., C. Cooper, C. A. Senior, H. Banks, J. Gregory, T. Johns, J. Mitchell, and R. Wood (2000). The simulation of SST, sea ice extents and ocean heat transports in a version of the Hadley Centre coupled model without flux adjustments. *Climate Dynamics* 16(2-3), 147–168.
- Gordon, H., L. Rotstayn, J. McGregor, M. Dix, E. Kowalczyk, S. O'Farrell, L. Waterman, A. Hirst, S. Wilson, M. Collier, I. Watterson, and T. Elliot (2002). The CSIRO Mk3 climate system model. Technical report, CSIRO Atmospheric Research Technical Paper.
- Goudie, A. S. (2006). Global warming and fluvial geomorphology. *Geomorphology* 79(3-4), 384–394.
- Graf, W. (1977). The rate law in fluvial geomorphology. *American Journal of Science* 277, 178–191.
- Graham, L., J. Andréasson, and B. Carlsson (2007). Assessing climate change impacts on hydrology from an ensemble of regional climate models, model scales and linking methods - A case study on the Lule River basin. *Climatic Change* 81(Supplement), 293–307.
- Gregory, J., T. Wigley, and P. Jones (1993). Application of Markov models to area-average daily precipitation series and interannual variability in seasonal totals. *Climate Dynamics* 8, 299 – 310.
- Grinsted, A., J. Moore, and S. Jevrejeva (2004). Nonlinear processes in geophysics application of the cross wavelet transform and wavelet coherence to geophysical time series. *Nonlinear Processes in Geophysics* 11, 561–566.
- Grinsted, A., J. Moore, and S. Jevrejeva (2009). Reconstructing sea level from paleo and projected temperatures 200 to 2100 ad. *Climate Dynamics* 34(4), 461–472.
- Guedes Soares, C. and M. Scotto (2004). Application of the r-largest order statistics for long-term predictions of significant wave height. *Coastal Engineering* 51, 387 – 394.
- Gustafsson, J. (2011). A rule of thumb for the optimal number of runs in Monte Carlo simulations. *The IUP Journal of Risk & Insurance* 8(3), 37 – 50.
- Guthrie, G. and R. Cottle (2002). Suffolk Coast and Estuaries. Coastal Habitat Management Plan Final Report. Technical report, Natural England/Environment Agency.

- Hadley, D. (2009). Land use and the coastal zone. *Land Use Policy* 26, S198–S203.
- Haigh, I., R. Nicholls, and N. Wells (2009a). A comparison of the main methods for estimating probabilities of extreme still water levels. *Coastal Engineering* 57(9), 838–849.
- Haigh, I., R. Nicholls, and N. Wells (2009b). Mean sea level trends around the English Channel over the 20th century and their wider context. *Continental Shelf Research* 29(17), 2083–2098.
- Haigh, I., R. Nicholls, and N. Wells (2010). Assessing changes in extreme sea levels: Application to the English Channel, 1900 - 2006. *Continental Shelf Research* 30(9), 1042–1055.
- Halcrow, W. (1997). Isle of Wight Shoreline Management Plan. Technical report, Isle of Wight Council and Environment Agency.
- Hall, J., I. Meadowcroft, E. Lee, and P. van Gelder (2002). Stochastic simulation of episodic soft coastal cliff recession. *Coastal Engineering* 46(3), 159–174.
- Hall, J., P. Sayers, M. Walkden, and M. Panzeri (2006). Impacts of climate change on coastal flood risk in England and Wales: 2030-2100. *Philosophical transactions. Series A, Mathematical, physical, and engineering sciences* 364(1841), 1027–49.
- Hampton, M. A. and G. B. Griggs (2004). Formation, Evolution and Stability of Coastal Cliffs - Status and Trends.
- Hancock, G. (2004). The use of landscape evolution models in mining rehabilitation design. *Environmental Geology* 46, 561–573.
- Hancock, G. (2009). A catchment scale assessment of increased rainfall and storm intensity on erosion and sediment transport for Northern Australia. *Geoderma* 152(3-4), 350–360.
- Hancock, G. and G. Willgoose (2001). The interaction between hydrology and geomorphology in a landscape simulator experiment. *Hydrological Processes* 15, 115–133.
- Hancock, G., G. Willgoose, and K. Evans (2002). Testing of the SIBERIA landscape evolution model using the Tin Camp Creek, Northern Territory, Australia, field catchment. *Earth Surface Processes and Landforms* 27(2), 125–143.
- Hands, E. (1983). The Great Lakes as a test model for profile responses to sea level changes. Florida: CRC Press, Boca Raton.
- Hanna, E., J. Cappelen, R. Allan, T. Jonsson, F. Le Blancq, T. Lillington, and K. Hickey (2008). New insights into North European and North Atlantic surface pressure variability, storminess, and related climatic change since 1830. *Journal of Climate* 21(24), 6739–6766.

- Hansom, J., N. Barltrop, and A. Hall (2008). Modelling the processes of cliff-top erosion and deposition under extreme storm waves. *Marine Geology* 253, 36–50.
- Hapke, C. and N. Plant (2010). Predicting coastal cliff erosion using a Bayesian probabilistic model. *Marine Geology* 278(1-4), 140–149.
- Hapke, C. and D. Reid (2007). National Assessment of Shoreline Change , Part 4 : Historical Coastal Cliff Retreat along the California Coast. Technical report, USGS.
- Harpham, C. and R. Wilby (2005). Multi-site downscaling of heavy daily precipitation occurrence and amounts. *Journal of Hydrology* 312, 1–21.
- Harvey, A. (1992). Process interactions, temporal scales and the development of hillslope gully systems: Howgill Fells, northwest England. *Geomorphology* 5(3-5), 323–344.
- Hashmi, M., A. Shamseldin, and B. Melville (2011). Comparison of SDSM and LARS-WG for simulation and downscaling of extreme precipitation events in a watershed. *Stochastic Environmental Research and Risk Assessment* 25(4), 475–484.
- Hasumi, H. and E. Emori (2004). K-1 coupled model (MIROC) description. Technical report, Centre for Climate System Research, University of Tokyo.
- Hay, L., G. McCabe, D. Wolock, and M. Ayers (1991). Simulation of precipitation by weather type analysis. *Water Resources Research* 27, 493 – 501.
- Hay, L., R. Wilby, and G. Leavesley (2000). A comparison of delta change and downscaled GCM scenarios for three mountainous basins in the United States. *Journal of American Water Resources Association* 36, 387–398.
- Hayakawa, Y. and Y. Matsukura (2003). Recession rates of waterfalls in Boso Peninsula, Japan, and a predictive equation. *Earth Surface Processes and Landforms* 28(6), 675–684.
- Haylock, M., G. Cawley, C. Harpham, R. Wilby, and C. Goodess (2006). Downscaling heavy precipitation over the United Kingdom: a comparison of dynamical and statistical methods and their future scenarios. *International Journal of Climatology* 26(10), 1397–1415.
- Hebeler, F. and R. Purves (2009). The influence of elevation uncertainty on derivation of topographic indices. *Geomorphology* 111(1-2), 4–16.
- Heimsath, A., W. Dietrich, K. Nishiizumi, and R. Finkel (1997). The soil production function and landscape equilibrium. *Nature* 388, 358–361.
- Heimsath, A., W. Dietrich, K. Nishiizumi, and R. Finkel (2001). Stochastic processes of soil production and transport: erosion rates, topographic variation and cosmogenic nuclides in the Oregon Coast Range. *Earth Surface Processes and Landforms* 26, 531–552.

- Heimsath, A. and T. Ehlers (2005). Quantifying rates and timescales of geomorphic processes. *Earth Surface Processes and Landforms* 30, 912–917.
- Held, I. (2012). Climate science: Constraints on the high end. *Nature Geoscience* 5(4), 236–237.
- Hessami, M., P. Gachon, T. Ouarda, and A. St-Hilaire (2008). Automated regression-based statistical downscaling tool. *Environmental Modelling & Software* 23(6), 813–834.
- Holthuijsen, L. (2007). *Waves in oceanic and coastal waters*. Cambridge: Cambridge University Press.
- Homma, M. and K. Horikawa (1965). Wave forces against a sea wall. In *Proc. 9th Conf. Coastal Engineering*, pp. 490–503.
- Horrillo-Caraballo, J. and D. Reeve (2008). Morphodynamic behaviour of a nearshore sandbank system: The Great Yarmouth Sandbanks, U.K. *Marine Geology* 254(1-2), 91–106.
- Houghton, J. (1997). *Global Warming: The complete briefing* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Howard, A. (1980). Thresholds in river regimes. London: George Allen and Unwin.
- Howard, A. (1994). A detachment-limited model of drainage basin evolution. *Water Resources Research* 30, 2261–2285.
- Howard, A. (1998). Long profile development of bedrock channels; interaction of weathering mass wasting, bed erosion, and sediment transport. pp. 297–319. Washington D.C.: AGU.
- Howard, A. and G. Kerby (1983). Channel changes in badlands. *Geological Society of America Bulletin* 94, 739–752.
- Howe, M. (2002). A review of coastal soft cliff resource in Wales, with particular reference to its importance for invertibrates. Technical report, Countryside Council for Wales, Bangor, UK.
- Huang, J., J. Zhang, Z. Zhang, S. Sun, and J. Yao (2011). Simulation of extreme precipitation indices in the Yangtze River basin by using statistical downscaling method (SDSM). *Theoretical and Applied Climatology*, 1–19.
- Hurrell, J. and H. von Loon (1997). Decadal variations in climate associated with the North Atlantic oscillation. *Climatic Change* 36, 301–326.
- Hutchinson, J. (1972). Field and laboratory studies of a fall in the Upper Chalk Cliffs at Joss Bay, Isle of Thanet. In R. Parry (Ed.), *Stress-Strain Behaviour of Soils: Proceedings of the Roscoe Memorial Symposium*. Henley-on-Thames, United Kingdom, pp. 692–706. London: G.T. Foulis and Co.

- Hutchinson, J. (1973). The response of London Clay cliffs to different rates of toe erosion. *Geol. Appl. Idrogeol.* 8, 221–239.
- Hutchinson, J. (1987). Some Coastal Landslides of the Southern Isle of Wight. In K. Barber (Ed.), *Wessex and the Isle of Wight Field Guide Prepared to Accompany the Annual Field Meeting Held at Southampton and Cowes 21-25 April 1987*, pp. 123–135. Cambridge: Quaternary Research Association.
- Huth, R. (1999). Statistical downscaling in central Europe: evaluation of methods and potential predictors. *Climate Research* 13, 91–101.
- Imaizumi, F., T. Hattanji, and Y. Hayakawa (2009). Channel initiation by surface and subsurface flows in a steep catchment of the Akaishi Mountains, Japan. *Geomorphology In Press,*
- Indermuhle, A., T. F. Stocker, F. Joos, H. Fischer, H. J. Smith, M. Wahlen, B. Deck, D. Mastroianni, J. Tschumi, T. Blunier, R. Meyer, and B. Stauffer (1999). Holocene carbon-cycle dynamics based on CO<sub>2</sub> trapped in ice at Taylor Dome, Antarctica. *398(6723)*, 121–126.
- Istanbulluoglu, E., R. Bras, H. Flores-Cervantes, and G. Tucker (2005). Implications of bank failures and fluvial erosion for gully development: Field observations and modeling. *Journal of Geophysical Research* 110.
- Jenkins, G., J. Murphy, D. Sexton, J. Lowe, P. Jones, and C. Kilsby (2009). UK climate projections: Briefing Report. Technical report, Met. Office Hadley Center, Exeter, UK.
- Jepsen, R., J. Roberts, and W. Lick (1997). Effects of bulk density on sediment erosion rates. *Water, Air and Soil Pollution* 99(21-31).
- Johns, T., J. Gregory, W. Ingram, C. Johnson, A. Jones, J. A. Lowe, J. Mitchell, D. Roberts, D. Sexton, D. Stevenson, S. Tett, and M. Woodage (2003). Anthropogenic climate change for 1860 to 2100 simulated with the HadCM3 model under updated emissions scenarios. *Climate Dynamics* 20(6), 583–612.
- Johnson, J. and K. Whipple (2010). Evaluating the controls of shear stress, sediment supply, alluvial cover and channel morphology on experimental bedrock incision rate. *Journal of Geophysical Research - Earth Surface* 115(F02018).
- Johnson, M. (1988). Why are ancient rocky shores so uncommon? *Journal of Geology* 96(4), 469 – 480.
- Jones, P., C. Kilsby, C. Harpham, V. Glenis, and A. Burton (2009). UK climate projections science report: Projections of future daily climate for the UK from the Weather Generator.
- Jones, P. and M. Mann (2004). Climate over past millenia. *Reviews of Geophysics* 42(RG2002).

- Jones, P. and P. Reid (2001). Assessing future changes in extreme precipitation over Britain using regional climate model integrations. *International Journal of Climatology* 21(11), 1337–1356.
- Jungclaus, J., N. Keenlyside, M. Botzet, H. Haak, J.-J. Luo, M. Latif, J. Marotzke, U. Mikolajewicz, and E. Roeckner (2006). Ocean circulation and tropical variability in the coupled model ECHAM5/MPI-OM. *Journal of Climate* 19(16), 3952–3972.
- Justensen, P. (1988). *Turbulent wave boundary layers*, Volume series pap. Lyngby, Denmark: Institute of Hydrodynamics and Hydraulic Engineering, Technical University of Denmark.
- Kalnay, E., M. Kanamitsu, R. Kistler, W. Collins, D. Deaven, L. Gandin, M. Iredell, S. Saha, G. White, J. Woollen, Y. Zhu, M. Chelliah, W. Ebisuzaki, W. Higgins, J. Janowiak, K. Mo, C. Ropelewski, J. Wang, A. Leetmaa, R. Reynolds, R. Jenne, and D. Joseph (1996). The NCEP/NCAR 40-year reanalysis project. *Bulletin of the American Meteorological Society* 77(3), 437–471.
- Kamphuis, J. W. (1987). Recession Rate of Glacial Till Bluffs. *Journal of Waterway, Port, Coastal, and Ocean Engineering* 113(1), 60–73.
- Karl, T. and K. Trenberth (2003). Modern global climate change. *Science* 302(5651), 1719–23.
- Katz, R. (1996). Use of conditional stochastic models to generate climate change scenarios. *Climatic Change* 32, 237–255.
- Katz, R. and B. Brown (1992). Extreme events in a changing climate: Variability is more important than averages. *Climatic Change* 21(3), 289–302.
- Katz, R. and M. Parlange (1998). Overdispersion phenomenon in stochastic modeling of precipitation. *Journal of Climate* 11, 591 – 601.
- Khan, T., P. Coulibaly, and Y. Dibike (2006). Uncertainty analysis of statistical downscaling methods. *Journal of Hydrology* 319, 357–382.
- Kharin, V., F. Zwiers, X. Zhang, and G. Hegerl (2007). Changes in temperature and precipitation extremes in the IPCC ensemble of global coupled model simulations. *Journal of Climate* 20, 1419–1444.
- Kilsby, C., P. Jones, A. Burton, A. Ford, H. Fowler, C. Harpham, P. James, A. Smith, and R. Wilby (2007). A daily weather generator for use in climate change studies. *Environmental Modelling & Software* 22(12), 1705–1719.
- Kingston, D., M. Todd, R. Taylor, J. Thompson, and N. Arnell (2009). Uncertainty in the estimation of potential evapotranspiration under climate change. *Geophysical Research Letters* 36.

- Kirkby, M. (1984). Modelling cliff development in South Wales: Savigear re-reviewed. *Zeitschrift fur Geomorphologie* 28, 405–426.
- Kirkby, M. (1985). A model for the evolution of regolith-mantled slopes. pp. 213–237. Boston: Unwin.
- Kirkby, M. (1986). A two-dimensional simulation model for slope and stream evolution. Boston, MA: Allen and Unwin.
- Kirkby, M. (1987). Modelling some influences of soil erosion, landslides and valley gradient on drainage density and hollow development. *Catena Supplement* 10, 1–14.
- Kirkby, M. (1992). An erosion-limited hillslope evolution model. *Catena Supplement* 23, 157–187.
- Kirkby, M. and L. Bracken (2009). Gully processes and gully dynamics. *Earth Surface Processes and Landforms* 34(14), 1841–1851.
- Kirkby, M. and L. Bull (2000). Some factors controlling gully growth in fine-grained sediments: A model applied in southeast Spain. *Catena* 40(2), 127–146.
- Kirkby, M., L. Bull, J. Poesen, J. Nachtergaele, and L. Vandekerckhove (2003). Observed and modelled distributions of channel and gully heads - With examples from SE Spain and Belgium. *Catena* 50(2-4), 415–434.
- Kochel, R. and J. Piper (1986). Morphology of large valleys on Hawaii: Evidence for groundwater sapping and comparisons with Martian valleys. *Journal of Geophysical Research* 91(B13), E175–E192.
- Komar, P. (1998). *Beach processes and sedimentation*. Upper Saddle River, N.J.: Prentice-Hall.
- Kooi, H. and C. Beaumont (1994). Escarpment evolution on high-elevation rifted margins: Insights derived from a surface process model that combines diffusion, advection and reaction. *Journal of Geophysical Research* 99(12), 191–209.
- Lancaster, S., S. Hayes, and G. Grant (2003). Effects of wood on debris flow runout in small mountain watersheds. *Water Resources Research* 39(6), 1168.
- Lane, S., V. Tayefi, S. Reid, D. Yu, and R. Hardy (2007). Interactions between sediment delivery, channel change, climate change and flood risk in a temperate upland environment. *Earth Surface Processes and Landforms* 32(3), 429–446.
- Lazarus, E., A. Ashton, A. Murray, S. Tebbens, and S. Burroughs (2011). Cumulative versus transient shoreline change: Dependencies on temporal and spatial scale. *Journal of Geophysical Research* 116(F2), F02014.

- Le Treut, H., R. Somerville, U. Cubasch, Y. Ding, C. Mauritzen, A. Mokssit, T. Peterson, and M. Prather (2007). Historical overview of climate change. In S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. Averyt, M. Tignor, and H. Miller (Eds.), *Climate change 2007: The physical science basis. Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, pp. 128. Cambridge, UK: Cambridge University Press.
- Leatherman, S. (1991). Modelling shore response to sea-level rise on sedimentary coasts. *Progress in Physical Geography* 14, 447–467.
- Leckie, D. (1994). Canterbury Plains, New Zealand; Implications for sequence stratigraphic models. *American Association of Petroleum Geologists Bulletin* 78(8), 1240– 1256.
- Lee, E. (1998). Problems associated with prediction of cliff recession rates for coastal defence. pp. 46–57. Bath: Geological society publishing.
- Lee, E. (2005). Coastal cliff recession risk: a simple judgement-based model. *Quarterly Journal of Engineering Geology and Hydrogeology* 38(1), 89–104.
- Lee, E. (2008). Coastal cliff behaviour: Observations on the relationship between beach levels and recession rates. *Geomorphology* 101(4), 558–571.
- Lee, E. and A. Clark (2002). *Investigation and management of soft rock cliffs*. London: Thomas Telford Publishing.
- Lee, E., J. Hall, and I. Meadowcroft (2001). Coastal cliff recession: the use of probabilistic prediction methods. *Geomorphology* 40(3-4), 253–269.
- Leopold, L. and T. Maddock (1953). The hydraulic geometry of stream channels and some physiographic implications. *Professional Paper of the U.S. Geological Survey*. 252.
- Leopold, L. and J. Miller (1956). Ephemeral streams - hydraulic factors and their relation to the drainage net. *Professional Paper of the U.S. Geological Survey*. 282A.
- Leopold, L., M. Wolman, and J. Miller (1964). *Fluvial processes in geomorphology*. San Francisco and London: Freeman.
- Leung, R., L. Mearns, F. Giorgi, and R. Wilby (2003). Regional climate research: Needs and opportunities. *Bulletin of the American Meteorological Society* 84, 89–95.
- Leyland, J. (2009). *Modelling the holocene evolution of coastal gullies on the Isle of Wight*. Unpublished phd thesis, University of Southampton.
- Leyland, J. and S. Darby (2008). An empirical-conceptual gully evolution model for channelled sea cliffs. *Geomorphology* 102(3-4), 419–434.

- Leyland, J. and S. E. Darby (2009). Effects of Holocene climate and sea-level changes on coastal gully evolution: insights from numerical modelling. *Earth Surface Processes and Landforms* 34(14), 1878–1893.
- Lim, M., N. Rosser, D. Petley, and M. Keen (2011). Quantifying the controls and influence of tide and wave impacts on coastal rock cliff erosion. *Journal of Coastal Research* 27, 46–56.
- Long, J. and N. Plant (2012). Extended Kalman Filter framework for forecasting shoreline evolution. *Geophysical Research Letters* 39(13), L13603.
- Lowe, J. and J. Gregory (2005). The effects of climate change on storm surges around the United Kingdom. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 363(1831), 1313–1328.
- Lowe, J., T. Howard, A. Pardaens, J. Tinker, J. Holt, S. Wakelin, G. Milne, J. Leake, J. Wolf, K. Horsburgh, T. Reeder, G. Jenkins, J. Ridley, S. Dye, and S. Bradley (2009). UK Climate Projections science report: Marine and coastal projections.
- Lozano, I., R. Devoy, W. May, and U. Andersen (2004). Storminess and vulnerability along the Atlantic coastlines of Europe: analysis of storm records and of a greenhouse gases induced climate scenario. *Marine Geology* 210(1-4), 205–225.
- Lyell, C. (1867). *Principles of geology, being an attempt to explain the former changes of the Earth's surface, by reference to causes now in operation* (10th ed.). London: Murray.
- Marzolff, I., R. J. and J. Poesen (2011). Short-term versus medium-term monitoring for detecting gully-erosion variability in a Mediterranean environment. *Earth Surface Processes and Landforms* 36, 1604–1623.
- Masselink, G. and M. Hughes (2003). *Introduction to Coastal Processes and Geomorphology*. London: Holder Arnold.
- Mastrandrea, M., C. Field, T. Stocker, O. Edenhofer, K. Ebi, D. Frame, H. Held, E. Kriegler, K. Mach, P. Matschoss, G.-K. Plattner, G. Yohe, and F. Zwiers (2010). Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties. Technical report, Intergovernmental Panel on Climate Change, Jasper Ridge, CA, USA.
- Mathworks (2008). *The MathWorks - MATLAB and Simulink for Technical computing*. <http://www.mathworks.com>.
- Matulla, C., W. Schöner, H. Alexandersson, H. Storch, and X. L. Wang (2007). European storminess: late nineteenth century to present. *Climate Dynamics* 31(2-3), 125–130.
- May, V. J. (1964). *A study of recent coastal changes in south-east England*. Unpublished msc thesis, University of Southampton.

- May, V. J. (1971). The Retreat of Chalk Cliffs. *Geographical* 137(2), 203–206.
- May, V. J. and J. D. Hansom (2003). *Coastal Geomorphology of Great Britain*. Peterborough: Joint Nature Conservation Committee.
- McKean, J. A., W. E. Dietrich, R. C. Finkel, J. R. Southon, and M. W. Caffee (1993). Quantification of soil production and downslope creep rates from cosmogenic  $^{10}\text{Be}$  accumulations on a hillslope profile. *Geology* 21(343-346).
- McKendry, I. G., K. Stahl, and R. D. Moore (2006). Synoptic sea-level pressure patterns generated by a general circulation model: comparison with types derived from NCEP/NCAR re-analysis and implications for downscaling. *International Journal of Climatology* 26(12), 1727–1736.
- Mearns, L., F. Giorgi, P. Whetton, D. Pabon, M. Hulme, and M. Lal (2003). Guidelines for use of climate scenarios developed from regional climate model experiments. *Data Distribution Centre of the Intergovernmental Panel on Climate Change*.
- Mearns, L., C. Rosenzweig, and R. Goldberg (1996). The effects of changes in daily and interannual climatic variability on CERES-Wheat: a sensitivity study. *Climatic Change* 32, 257 – 292.
- Méndez, F., M. Menéndez, A. Luceño, and I. Losada (2007). Analyzing monthly extreme sea levels with a time-dependent GEV model. *Journal of Atmospheric and Oceanic Technology* 24(5), 894–911.
- Menéndez, M., F. Méndez, C. Izaguirre, A. Luceño, and I. Losada (2009). The influence of seasonality on estimating return values of significant wave height. *Coastal Engineering* 56(3), 211–219.
- Menendez, M., F. J. Mendez, and I. J. Losada (2009). Forecasting seasonal to interannual variability in extreme sea levels. *ICES Journal of Marine Science* 66(7), 1490–1496.
- Menéndez, M. and P. Woodworth (2010). Changes in extreme high water levels based on a quasi-global tide-gauge data set. *Journal of Geophysical Research* 115(C10), 1–15.
- Meyer-Peter, E. and R. Muller (1948). Formulas for bed load transport. In *Proceedings of the 2nd congress of the International Association for Hydraulic Research*, Stockholm, pp. 39–64.
- Milliman, J. and K. Farnsworth (2011). *River discharge to the coastal ocean: A global synthesis*. New York: Cambridge University Press.
- Milliman, J. and R. Meade (1983). World-wide delivery of river sediment to the oceans. *Journal of Geology* 91(1), 1 – 21.
- Milliman, J. and J. Syvitski (1992). Geomorphic/tectonic control of sediment discharge to the ocean: The importance of small mountain rivers. *Journal of Geology* 100(5), 525 – 544.

- Moberg, A., D. M. Sonechkin, K. Holmgren, N. M. Datsenko, and W. Karlen (2005). Highly visible northern hemisphere temperatures reconstructed from low- and high-resolution proxy data. *Nature* 433, 613–617.
- Montgomery, D. and K. Gran (2001). Downstream variations in the width of bedrock channels. *Water Resources Research* 37(6), 1841 – 1846.
- Morton, I., J. Bowers, and G. Mould (1997). Estimating return period wave heights and wind speeds using a seasonal point process model. *Coastal Engineering* 31, 305 – 326.
- Mullan, B., D. Wratt, S. Dean, M. Hollis, S. Allan, T. Williams, and G. Kenny (2008). Climate change effects and impact assessment: A guidance for local government in New Zealand. Technical report, Ministry for the Environment, Wellington.
- Murphy, J., D. Sexton, G. Jenkins, B. Booth, C. Brown, R. Clark, M. Collins, G. Harris, E. Kendon, R. Betts, S. Brown, K. Humphrey, M. McCarthy, R. McDonald, A. Stephens, C. Wallace, R. Warren, R. Wilby, and R. Wood (2009). UK climate projections science report: climate change projections. Technical report, Met Office Hadley Centre, Exeter.
- Murray, A. B. and C. Paola (1994). A cellular model of braided rivers. *Nature* 371, 54–57.
- Murthy, K. (2000). Monte Carlo: Basic. In *Indian Society for Radiation Physics*, pp. 76.
- Nakicenovic, N., J. Alcamo, G. Davis, B. de Vries, J. Fenhann, S. Gaffin, K. Gregory, A. Gruber, T. Jung, T. Kram, E. La Rovere, L. Michaelis, S. Mori, T. Morita, W. Pepper, H. Pitcher, L. Price, K. Riahi, A. Roehrl, H.-H. Rogner, A. Sankovski, M. Schlesinger, P. Shukla, S. Smith, R. Swart, S. van Rooijen, N. Victor, and Z. Dadi (2000). IPCC Special Report on Emissions Scenarios. Technical report, Cambridge, UK.
- Natural England (1997). Isle of Wight natural area profile. Technical report, Natural England.
- Nicholas, A. (2005). Cellular modelling in fluvial geomorphology. *Earth Surface Processes and Landforms* 30(5), 645–649.
- Nicholas, A. and T. Quine (2010). Quantitative assessment of landform equifinality and palaeoenvironmental reconstruction using geomorphic models. *Geomorphology* 121(3-4), 167–183.
- Nicholas, A. P. (2009). Reduced-complexity flow routing models for sinuous single-thread channels: intercomparison with a physically-based shallow-water equation model. *Earth Surface Processes and Landforms* 34(5), 641–653.
- Nicholls, R., S. P. Leatherman, K. C. Dennis, and C. R. Volonte (1995). Impacts and responses to sea-level rise: qualitative and quantitative assessments. *Journal of Coastal Research Special Is*, 26–43.

- Nicholls, R. J. and A. Cazenave (2010). Sea-level rise and its impact on coastal zones. *Science* 328(5985), 1517–20.
- Norton, T., J. Leyland, and S. Darby (2006). *Modelling flow, erosion and long-term evolution of incising channels : managing hydrology and geomorphology for ecology*, Volume 306. Wallingford, UK: International Association of Hydrological Sciences.
- O'Callaghan, J. F. and D. M. Mark (1984). The extraction of drainage networks from digital elevation data. *Computer Vision, Graphics, and Image Processing* 28, 328–344.
- Odoni, N. A. (2007). *Exploring equifinality in a landscape evolution model*. Unpublished phd thesis, University of Southampton, Southampton.
- Ordnance Survey (2009). Revision policy for basic-scale products. Technical report, Ordnance Survey, Southampton.
- Osborn, T. J., K. R. Briffa, S. F. B. Tett, P. D. Jones, and R. Trigo (2000). Evaluation of the North Atlantic oscillation as simulated by a coupled climate model. *Climate Dynamics* 15, 685–702.
- Panchang, V. and D. Li (2006). Large waves in the gulf of Mexico caused by Hurricane Ivan. *Bulletin of the American Meteorological Society*, 481 – 489.
- Parker, C., A. Simon, and C. R. Thorne (2008). The effects of variability in bank material properties on riverbank stability: Goodwin Creek, Mississippi. *Geomorphology* 101(4), 533–543.
- Partheniades, E. (1965). Erosion and deposition of cohesive soils. *Journal of the hydraulics division ASCE* 91, 105–138.
- Pazzaglia, F. J. (2003). Landscape Evolution Models. In A. Gillespie, S. Porter, and B. Atwater (Eds.), *The Quaternary Period in the United States*, Volume 1, pp. 247–274. Amsterdam: Elsevier.
- Pei , J. and S. Sherwin (2005). Finite difference, finite element and finite volume methods for partial differential equations. In S. Yip (Ed.), *Handbook of Materials Modelling. Volume 1: Methods and Models*, Volume M, Chapter 8.2, pp. 1–32. Springer.
- Pilkey, O. and J. Cooper (2004). CLIMATE: Society and Sea Level Rise. *Science* 303(5665), 1781–1782.
- Pilkey, O. H., R. S. Young, S. R. Riggs, A. W. S. Smith, W. Huiyan, and W. D. Pilkey (1993). The concept of shoreface profile of equilibrium: a critical review. *Journal of Coastal Research* 9(1), 255–278.
- Pillans, B. (1985). Drainage initiation by subsurface flow in South Taranaki, New Zealand. *Geology* 13(4), 262–265.

- Pilling, C. and J. A. A. Jones (1999). High resolution climate change scenarios: implications for British runoff. *Hydrological Processes* 13(17), 2877–2895.
- Pilling, C. G. and J. A. A. Jones (2002). The impact of future climate change on seasonal discharge, hydrological processes and extreme flows in the Upper Wye experimental catchment, Mid-Wales. *Hydrological Processes* 16(6), 1201–1213.
- Plecha, S., P. A. Silva, A. Oliveira, and J. a. M. Dias (2012). Establishing the wave climate influence on the morphodynamics of a coastal lagoon inlet. *Ocean Dynamics* 62(5), 799–814.
- Poesen, J., J. Nachtergael, G. Verstraeten, and C. Valentin (2003). Gully erosion and environmental change: importance and research needs. *Catena* 50(2-4), 91–133.
- Pope, V. D., M. L. Gallani, P. R. Rowntree, and R. A. Stratton (2000). The impact of new physical parametrizations in the Hadley Centre climate model: HadAM3. *Climate Dynamics* 16(2-3), 123–146.
- Prosser, I. and S. Winchester (1996). History and processes of gully initiation and development in eastern Australia. *Zeitschrift fur Geomorphologie N.F. Suppl*, 91–109.
- Prudhomme, C. and H. Davies (2009). Assessing uncertainties in climate change impact analyses on the river flow regimes in the UK. Part 1: baseline climate. *Climatic Change* 93(1), 177–195.
- Prudhomme, C., D. Jakob, and C. Svensson (2003). Uncertainty and climate change impact on the flood regime of small UK catchments. *Journal of Hydrology* 277(1-2), 1–23.
- Prudhomme, C., N. Reynard, and S. Crooks (2002). Downscaling of global climate models for flood frequency analysis: Where are we now? *Hydrological Processes* 16, 1137–1150.
- Putins, P. (1962). Correlation between pressure changes aloft and at the surface in the Greenland area, and some aspect of "steering" problem. In W. Morikofer and F. Steinhouser (Eds.), *Archiv fur meterologie, Geophysik und Bioklimatologie, Serie A: Meteorologie und Geophysik*, pp. 218–240. Springer Verlag.
- Pye, K. and S. Blott (2006). Coastal processes and morphological change in the Dunwich-Sizewell area , Suffolk , UK. *Journal of Coastal Research* 22(3), 453–473.
- Qian, B. and M. A. Saunders (2003). Seasonal predictability of wintertime storminess over the North Atlantic. *Geophysical Research Letters* 30(13), 1698.
- Quigley, R. and A. Zeman (1980). Strategy for hydraulic, geolocial and geotechnical assessment of Great Lakes shoreline bluffs. In S. McCann (Ed.), *The coastline of Canada*, pp. 397 – 406. Geological Survey of Canada.

- Quinn, J. D., N. J. Rosser, W. Murphy, and J. A. Lawrence (2010). Identifying the behavioural characteristics of clay cliffs using intensive monitoring and geotechnical numerical modelling. *Geomorphology* 120(3 - 4), 107 – 122.
- Rahmstorf, S., A. Cazenave, J. Church, J. Hansen, R. Keeling, D. Parker, and R. Somerville (2007). Recent climate observations compared to projections. *Science* 316(5825), 709.
- Ranasinghe, R. and M. Stive (2009). Rising seas and retreating coastlines. *Climatic Change* 97(3), 465–468.
- Randall, D., R. Wood, S. Bony, R. Colman, T. Fichefet, J. Fyfe, V. Kattsov, A. Pitman, J. Shukla, J. Srinivasan, R. Stouffer, A. Sumi, and K. Taylor (2007). Climate Models and Their Evaluation. In S. Solomon, D. Quin, M. Manning, Z. Chen, M. Marquis, K. Averyt, M. Tignor, and H. Miller (Eds.), *Climate Change 2007: The Physical Science Basis. Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, pp. 74. Cambridge, UK: Cambridge University Press.
- Reichler, T. and J. Kim (2008). How Well Do Coupled Models Simulate Today's Climate? *Bulletin of the American Meteorological Society* 89(3), 303–311.
- Rignot, E., I. Velicogna, M. R. van den Broeke, A. Monaghan, and J. Lenaerts (2011). Acceleration of the contribution of the Greenland and Antarctic ice sheets to sea level rise. *Geophysical Research Letters* 38(5), L05503.
- Rinaldi, M. and S. Darby (2007). Modelling river bank erosion processes and mass failure mechanisms: Progress towards fully coupled simulations. In H. Habersack, H. Piégay, and M. Rinaldi (Eds.), *Gravel Bed Rivers VI: Form Process Understanding to River Restoration*, pp. 213–239. Amsterdam: Elsevier.
- Robinson, A. (1980). Erosion and accretion along part of the Suffolk coast of East Anglia, England. *Marine Geology* 37, 133–146.
- Robinson, D. and L. Jerwood (1987a). Frost and salt weathering of chalk shore platforms near Brighton, Sussex, UK. *Transactions of the Institute of British Geographers* 12(2), 217–226.
- Robinson, D. and L. Jerwood (1987b). Sub-aerial weathering of chalk shore platforms during harsh winters in southeast England. *Transactions of the Institute of British Geographers* 77(2), 217–226.
- Robinson, L. (1977). Marine Erosive Processes at the Cliff Foot. *Marine Geology* 23, 257–271.
- Robinson, S. A. and S. P. Hesselbo (2004). Fossil-wood carbon-isotope stratigraphy of the non-marine Wealden Group (Lower Cretaceous, southern England). *Journal of the Geological Society* 161(1), 133–145.

- Rodriguez-Iturbe, I. and A. Rinaldo (1997). *Fractal River Basins; Chance and Self-organisation*. Cambridge: Cambridge University Press.
- Roering, J., L. Kirchner, and W. Dietrich (1999). Evidence for non-linear, diffusive sediment transport on hillslope and implications for landscape morphology. *Water Resources Research* 35, 853 – 870.
- Roering, J., L. Kirchner, L. Sklar, and W. Dietrich (2001). Experimental hillslope evolution by nonlinear creep and landsliding. *Geology* 29(143 -146).
- Rosen, S. P. (1978). A Regional Test Of The Bruun Rule On Shoreline Erosion. *Marine Geology* 26, M7 – M16.
- Rosenbloom, N. and R. Anderson (1994). Hillslope and channel evolution in a marine terraced landscape, Santa-Cruz, California. *Journal of Geophysical Research - Solid Earth* 99(B7), 14013 – 14029.
- Rosser, N., D. Petley, M. Lim, S. Dunning, and R. Allison (2005). Terrestrial laser scanning for monitoring the process of hard rock coastal cliff erosion. *Quarterly Journal of Engineering Geology and Hydrogeology* 38(4), 363–375.
- Rowan, A., H. Roberts, M. Jones, G. Duller, S. Covey-Crump, and S. Brocklehurst (2012). Optically stimulated luminescence dating of glaciofluvial sediments on the Canterbury Plains, South Island, New Zealand. *Quaternary Geochronology* 8, 10 –022.
- Rowlands, D. J., D. J. Frame, D. Ackerley, T. Aina, B. B. B. Booth, C. Christensen, M. Collins, N. Faull, C. E. Forest, B. S. Grandey, E. Gryspeerdt, E. J. Highwood, W. J. Ingram, S. Knight, A. Lopez, N. Massey, F. McNamara, N. Meinshausen, C. Piani, S. M. Rosier, B. M. Sanderson, L. A. Smith, D. A. Stone, M. Thurston, K. Yamazaki, Y. Hiro Yamazaki, and M. R. Allen (2012). Broad range of 2050 warming from an observationally constrained large climate model ensemble. *Nature Geoscience* 5(4), 256–260.
- Royal Haskoning (2010). Isle of Wight Shoreline Management Plan 2. Technical report, Isle of Wight Council and Environment Agency.
- Rubino, G. and B. Tuffin (2009). *Rare event simulation using Monte Carlo methods*. Hoboken, NJ, USA: Wiley.
- Ruggiero, P., P. Komar, W. McDougal, J. Marra, and R. Beach (2001). Wave runup, extreme water levels and the erosion of properties backing beaches. *Journal of Coastal Research*, 407–419.
- Rustomji, P. and T. Pietsch (2007). Alluvial sedimentation rates from southeastern Australia indicate post-European settlement landscape recovery. *Geomorphology* 90, 73–90.

- Rutherford, I. D., I. Prosser, and J. Davis (1997). Simple approaches to predicting rates and extent of gully development. In S. S. Y. Wang, E. J. Langendoen, and F. D. Shields (Eds.), *Management of landscapes disturbed by channel incision*, pp. 1124–1130. The centre for hydroscience and engineering: University of Mississippi.
- Sallenger, A., W. Krabill, J. Brock, R. Swift, S. Manizade, and H. Stockdon (2002). Sea-cliff erosion as a function of beach changes and extreme wave runup during the 1997-1998 El Niño. *Marine Geology* 187(3-4), 279–297.
- Sanders, N. (1968). Wave tank experiments on the erosion of rocky coasts. *Papers of the Proceedings of the Royal Society of Tasmania* 102, 11–16.
- Sansom, J. and J. Renwick (2007). Climate change scenarios for New Zealand rainfall. *Journal of Applied Meteorology and Climatology* 46, 573 – 590.
- Schmith, T., K. Alexndersson, and H. Tuomenvirta (1997). North-Atlantic European pressure observations 1868 - 1995 (WASA dataset 1.0). Technical report, Danish Meteorological Institute.
- Schoorl, J. M., M. P. W. Sonneveld, and A. Veldkamp (2000). Three-dimensional landscape process modelling: the effect of DEM resolution. *Earth Surface Processes and Landforms* 25(9), 1025–1034.
- Schumm, S. and L. Phillips (1986). Composite channels of the Canterbury Plain, New Zealand: A Martian analog? *Geology* 14 (4), 326–329.
- Schumm, S. A. (1991). *To Interpret the Earth: Ten ways to be wrong*. Cambridge: Cambridge University Press.
- Schumm, S. A. (1999). Causes and Controls of Channel Incision. In S. E. Darby and A. Simon (Eds.), *Incised river channels: Process, forms, engineering and management*, Chapter 2, pp. 19–37. Chichester: Wiley.
- SCOPAC (2004). Sediment Transport Study of the Dorset to West Sussex Region. Technical report, Report for the Standing Conference on Problems Associated with the Coastline.
- Semenov, M. and E. Barrow (1997). Use of a stochastic weather generator in the development of climate change scenarios. *Climatic Change* 35(397 - 414).
- Semenov, M., R. Brooks, E. Barrow, and C. Richardson (1998). Comparison of the WGEN and LARS-WG stochastic weather generators for diverse climates. *Climate Research* 10, 95 – 107.
- Semenov, M. A. (2008). Simulation of extreme weather events by a stochastic weather generator. *Climate Research* 35(203-212).
- Shih, S. and P. Komar (1994). Sediments, beach morphology and sea-cliff erosion within an Oregon coastal littoral cell. *Journal of Coastal Research* 10, 144–157.

- Sidorchuk, A. (1999). Dynamic and static models of gully evolution. *Catena* 37, 401–414.
- Simon, A. and S. Darby (1999). Nature and significance of incised river channels. In S. E. Darby A and Simon (Eds.), *Incised river channels: Process, forms, engineering and management*, Chapter 1, pp. 3–18. Chichester: Wiley.
- Simpson, G. and F. Schlunegger (2003). Topographic evolution and morphology in response to coupled fluvial and hillslope sediment transport. *Journal of Geophysical Research* 108(B6), 2300.
- Sklar, L. and W. Dietrich (2001). Sediment and rock strength controls on river incision into bedrock. *Geology* 29(12), 1087–1090.
- Sklar, L. and W. Dietrich (2008). Implications of the saltation-abrasion bedrock incision model for steady-state river longitudinal profile relief and concavity. *Earth Surface Processes and Landforms* 33(7), 1129–1151.
- Sklar, L. S. and W. E. Dietrich (1998). River longitudinal profiles and bed-rock incision models: Stream power and the influence of sediment supply. Volume 107. Washington D.C: AGU.
- Slingerland, R., S. D. Willett, and L. H. Hennessey (1997). A new fluvial bedrock erosion model based on the work-energy principle. *Eos Transactions of the AGU* 78(46).
- Slingerland, R., S. D. Willett, and N. Hovius (1998). Slope-area scaling as a test of fluvial bedrock erosion laws. *Eos Transactions of the AGU* 79(45).
- Slott, J., A. Murray, A. Ashton, and T. Crowley (2006). Coastline responses to changing storm patterns. *Geophysical Research Letters* 33(18), L18404.
- Small, E. E., R. S. Anderson, and G. S. Hancock (1999). Estimates of the rate of regolith production using  $^{10}\text{Be}$  and  $^{26}\text{Al}$  from an alpine hillslope. *Geomorphology* 27, 131–150.
- Solomon, S., D. Qin, M. Manning, R. B. Alley, T. Berntsen, N. Bindoff, Z. Chen, A. Chidthaisong, J. Gregory, G. Hegerl, M. Heimann, B. Hewiston, B. Hoskins, F. Joos, J. Jouzel, V. Kattsov, U. Lohmann, T. Matsuno, M. Molina, N. Nicholls, J. Overpeck, G. Raga, V. Ramaswamy, J. Ren, M. Rusticucci, R. Somerville, T. Stocker, P. Whetton, R. Wood, and D. Wratt (2007). Technical Summary. In S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. Averyt, M. Tignor, and H. Miller (Eds.), *Climate Change 2007: The Physical Science Basis. Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, pp. 92. Cambridge, UK: Cambridge University Press.
- Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K. Averyt, M. Tignor, and H. Miller (2007). *Climate change 2007: The physical science basis. Contribution of the Working Group 1 to the Fourth Assessment Report to the Intergovernmental Panel on Climate Change*. Cambridge, UK: Cambridge University Press.

- Sorensen, R. (1993). *Basic wave mechanics for coastal and ocean engineers*. New York: John Wiley and Sons.
- STARDEX (2005). Downscaling climate extremes. Technical report, Climatic Research Unit, UEA, Norwich.
- Stive, M. (2004). How Important is Global Warming for Coastal Erosion? *Climatic Change* 64(1), 27–39.
- Stock, J. D. and D. R. Montgomery (1999). Geologic constraints on bedrock river-incision using the stream power law. *Journal of Geophysical Research* 104, 4983–4993.
- Stockdon, H., R. Holman, P. Howd, and J. Sallenger (2006). Empirical parameterization of setup, swash, and runup. *Coastal Engineering* 53(7), 573–588.
- Strahler, A. (1952). Dynamic basis of geomorphology. *Geological Society of America Bulletin* 63, 923–938.
- Stroeve, J., M. Holland, W. Meier, T. Scambos, and M. Serreze (2007). Arctic sea ice decline: faster than forecast. *Geophysical Research Letters* 34 (L09501).
- Su, B., Z. Kundzewicz, and T. Jiang (2009). Simulation of extreme precipitation over the Yangtze River Basin using Wakeby distribution. *Theoretical and Applied Climatology* 96(3-4), 209–219.
- Summerfield, M. A. (1991). *Global Geomorphology*. Harlow: Pearson Prentice Hall.
- Sunamura, T. (1977). A relationship between wave-induced cliff erosion and erosive force of waves. *The Journal of Geology* 85(5), 613 – 618.
- Sunamura, T. (1992). *Geomorphology of rocky coasts*. Chichester: Wiley.
- Temme, A., J. Baartman, and J. Schoorl (2009). Can uncertain landscape evolution models discriminate between landscape responses to stable and changing future climate? A millennial-scale test. *Global and Planetary Change* 69(1-2), 48–58.
- Thieler, E., E. Himmelstoss, J. Zichichi, and A. Ergul (2008). The Digital Shoreline Analysis System (DSAS) version 4.0, an ArcGIS Extension for Calculating Historic Shoreline Change. Technical report, U.S. Geological Survey Open-File Report.
- Thomas, R. and A. P. Nicholas (2002). Simulation of braided river flow using a new cellular routing scheme. *Geomorphology* 43(3-4), 179–795.
- Thorne, C. R. (1982). Processes and mechanisms of river bank erosion. In R. D. Hey, J. C. Bathurst, and C. R. Thorne (Eds.), *Gravel bed rivers*, pp. 227 – 271. Chichester: John Wiley & Sons.
- Timbal, B., A. Dufour, and B. McAvaney (2003). An estimate of future climate change for western France using a statistical downscaling technique. *Climate Dynamics* 20, 807 – 823.

- Tolhurst, T., K. Black, S. Shayler, S. Mather, I. Black, K. Baker, and D. Paterson (1999). Measuring the in situ erosion shear stress of intertidal sediments with the Cohesive Strength Meter (CSM). *Estuarine, Coastal and Shelf Science* 49(2), 281 – 294.
- Tomkin, J. H., M. T. Brandon, F. J. Pazzaglia, J. R. Barbour, and S. D. Willett (2003). Quantitative testing of bedrock incision models for the Clearwater River, NW Washington State. *Journal of Geophysical Research* 108.
- Trenhaile, A. (1987). *The geomorphology of rock coasts*. New York: Oxford University Press.
- Trenhaile, A. (2009). Modeling the erosion of cohesive clay coasts. *Coastal Engineering* 56(1), 59–72.
- Trenhaile, A. (2010). Modeling cohesive clay coast evolution and response to climate change. *Marine Geology* 277(1-4), 11–20.
- Tricart, J. and A. Callieux (1972). *Introduction to climatic geomorphology*. Harlow: Longman.
- Tryhorn, L. and A. DeGaetano (2011). A comparison of techniques for downscaling extreme precipitation over the Northeastern United States. *International Journal of Climatology* 31(13), 1975–1989.
- Tucker, G. (2004). Drainage basin sensitivity to tectonic and climatic forcing: implications of a stochastic model for the role of entrainment and erosion thresholds. *Earth Surface Processes and Landforms* 29(2), 185–205.
- Tucker, G. and R. Bras (2000). A stochastic approach to modelling the role of rainfall variability in drainage basin evolution. *Water Resources* 36(7), 1953–1964.
- Tucker, G. and G. R. Hancock (2010). Modelling landscape evolution. *Earth Surface Processes and Landforms* 35, 28–50.
- Tucker, G., S. Lancaster, N. Gasparini, R. Bras, and S. Rybarczyk (2001a). An object-oriented framework for distributed hydrologic and geomorphic modeling using triangulated irregular networks. *Computers & Geosciences* 27(8), 959–973.
- Tucker, G., S. Lancaster, N. Gasparini, R. Bras, and S. Rybarczyk (2001b). The Channel-Hillslope Integrates Landscape Development (CHILD) model . In R. Harmon and W. Doe (Eds.), *Landscape erosion and evolution modelling*, Chapter 12, pp. 349–388. Dordrecht: Kluwer Academic/Plenum.
- Tucker, G. and R. Slingerland (1996). Predicting sediment flux from fold and thrust belts. *Basin Research* 8, 329–349.
- Tucker, G. and R. Slingerland (1997). Drainage basin responses to climate change. *Water Resources Research* 33.

- Tucker, G. E. and R. L. Slingerland (1994). Erosional dynamics, flexural isostasy, and long-lived escarpments: A numerical modeling study. *J. Geophys. Res.* 99.
- Ulbrich, U., J. G. Pinto, H. Kupfer, G. C. Leckebusch, T. Spangehl, and M. Reyers (2008). Changing Northern Hemisphere Storm Tracks in an Ensemble of IPCC Climate Change Simulations. *Journal of Climate* 21(8), 1669–1679.
- Valentin, C., J. Poesen, and Y. Li (2005). Gully erosion: Impacts, factors and control. *Catena* 63(2-3), 132–153.
- Vallejo, L. E. and R. DeGroot (1988). Bluff response to wave action. *Engineering Geology* 26(1), 1–16.
- Van De Wiel, M., T. Coulthard, M. Macklin, and J. Lewin (2007). Embedding reach-scale fluvial dynamics within the CAESAR cellular automaton landscape evolution model. *Geomorphology* 90(3-4), 283–301.
- van den Beek, P. and P. Bishop (2003). Cenozoic river profile development in the Upper Lachlan catchment (SE Australia) as a test of quantitative fluvial incision models . *Journal of Geophysical Research* 108(2309).
- Van den Dool, H. (1989). A new look at weather forecasting through analogues. *Monthly Weather Review* 117, 2230 – 2247.
- Van Montfort, M. and J. Witter (1986, June). The Generalized Pareto distribution applied to rainfall depths. *Hydrological Sciences Journal* 31(2), 151–162.
- Vanwalleghem, T., G. J. J.-H. F. and A. Laguna (2009). Evaluating a general sediment transport model for linear incisions under field conditions. *Earth Surface Processes and Landforms* 34, 1852–1857.
- Vanwalleghem, T., P. J. V.-G. N. J. and J. Deckers (2005). Characteristics, controlling factors and importance of deep gullies under cropland on loess-derived soils. *Geomorphology* 69, 76–91.
- Versteeg, H. and W. Malalasekera (1995). *An introduction to computational fluid dynamics: the finite volume method*. Pearson Higher Education.
- Vidal, J. and S. D. Wade (2008). Multimodel projections of catchment-scale precipitation regime. *Journal of Hydrology* 353(1-2), 143–158.
- Vitousek, S. and C. Fletcher (2008). Maximum annually recurring wave heights in Hawai'i. *Pacific Science* 62(4), 541 – 553.
- von Storch, H., E. Zorita, and U. Cubasch (1993). Downscaling of global climate change estimates to regional scales: an application to Iberian rainfall in wintertime. *Journal of Climate* 6, 1161 – 1171.

- Walkden, M. and M. Dickson (2006). The response of soft rock shore profiles to increased sea-level rise. Technical report, Tyndall Centre for Climate Change Research.
- Walkden, M. and M. Dickson (2008). Equilibrium erosion of soft rock shores with a shallow or absent beach under increased sea level rise. *Marine Geology* 251(1-2), 75–84.
- Walkden, M. and J. Hall (2011). A mesoscale predictive model of the evolution and management of a soft-rock coast. *Journal of Coastal Research* 27(2001), 529–543.
- Walkden, M. J. A. and J. W. Hall (2005). A predictive Mesoscale model of the erosion and profile development of soft rock shores. *Coastal Engineering* 52(6), 535–563.
- Walsh, J. E., W. L. Chapman, V. Romanovsky, J. H. Christensen, and M. Stendel (2008). Global climate model performance over Alaska and Greenland. *Journal of Climate* 21(23), 6156–6174.
- Wang, X., V. Swail, and A. Cox (2010). Dynamical versus statistical downscaling methods for ocean wave heights. *International Journal of Climatology* 30(3), 317–332.
- Wang, X., F. Zwiers, V. Swail, and Y. Feng (2009). Trends and variability of storminess in the Northeast Atlantic region, 1874–2007. *Climate Dynamics* 33(7), 1179–1195.
- Ware, J. R. (1871). *The Isle of Wight*. London: Provost and Co.
- Wasson, R., R. Mazari, B. Starr, and G. Clifton (1998). The recent history of erosion and sedimentation on the Southern Tablelands of southeastern Australia: sediment flux dominated by channel incision . *Geomorphology* 24, 297–308.
- Watson, D. F. and G. M. Philip (1984). Systematic triangulations. *Computer Vision, Graphics, and Image Processing* 26(2), 217–223.
- Watterson, I., S. O'Farrell, and M. Dix (1997). Energy transport in climates simulated by a GCM which includes dynamical sea-ice. *Journal of Geophysical Research - Atmospheres* 102, 11027–11037.
- Weggel, J. R. (1976). A method for estimating long-term erosion rates from a long-term rise in water level. Technical report, U.S. Army Corps of Engineers, Coastal Engineering Research Centre, Fort Velvoir, Va.
- Wharton, G., N. Arnell, K. Gregory, and A. Gurnell (1989). River discharge estimated from channel dimensions. *Journal of Hydrology* 106(3-4), 365–376.
- Whipple, K. and G. Tucker (1999). Dynamics of the stream-power river incision model: implications for height limits of mountain ranges, landscape response timescales, nad research needs. *Journal of Geophysical Research - Solid Earth* 104, 17661–17674.
- Whipple, K. and G. Tucker (2002). Implications of sediment-flux-dependent river incision models for landscape evolution. *Journal of Geophysical Research* 107, 1–20.

- White, H. A. O. (1921). *A short account of the geology of the Isle of Wight*. London: Natural Environment Research Council.
- Whitehead, P. G., R. L. Wilby, D. Butterfield, and A. J. Wade (2006). Impacts of climate change on in-stream nitrogen in a lowland chalk stream: an appraisal of adaptation strategies. *The Science of the total environment* 365(1-3), 260–73.
- Whitford, J. A., L. T. H. Newham, O. Vigiak, A. R. Melland, and A. M. Roberts (2010). Rapid assessment of gully sidewall erosion rates in data-poor catchments: A case study in Australia. *Geomorphology* 118(3 - 4), 330 – 338.
- Whittaker, A. and S. Boulton (2012). Tectonic and climatic controls on knickpoint retreat rates and landscape response times. *Journal of Geophysical Research* 117(F2), F02024.
- Wigley, T., P. Jones, K. Briffa, and G. Smith (1990). Obtaining subgrid scale information from coarse-resolution general circulation model output. *Journal of Geophysical Research* 95, 1943 – 1953.
- Wilby, R. (1994). Stochastic weather type simulation for regional climate change impact assessment. *Water Resources Research* 30, 3395 – 3403.
- Wilby, R. (2008). Downscaling future skew surge statistics at Sheerness, Kent. Phase 3 studies - synthesis report. Thames Estuary 2100. Technical report, Environment Agency.
- Wilby, R. and C. Dawson (2007). SDSM 4.2 - A descision support tool for the assessment of regional climate change impacts, User Manual. Technical report.
- Wilby, R., C. Dawson, and E. Barrow (2002). SDSM - a decision support tool for the assessment of regional climate change impacts. *Environmental Modelling & Software* 17(2), 145–157.
- Wilby, R., L. Hay, W. Gutowski Jr., R. Arritt, E. Takle, Z. Pan, G. Leavesley, and M. Clark (2000). Hydrological Responses to Dynamically and Statistically Downscaled Climate Model Output. *Geophysical Research Letters* 27.
- Wilby, R., P. Whitehead, A. Wade, D. Butterfield, R. Davis, and G. Watts (2006). Integrated modelling of climate change impacts on water resources and quality in a lowland catchment: River Kennet, UK. *Journal of Hydrology* 330(1-2), 204–220.
- Wilby, R. and T. Wigley (1997). Downscaling general circulation model output: a review of methods and limitations. *Progress in Physical Geography* 21, 530 – 548.
- Wilby, R., T. Wigley, D. Conway, P. Jones, B. Hewiston, J. Main, and D. Wilks (1998). Statistical downscaling of general circulation model outputs: a review of methods. *Water Resources Research* 34, 2995 – 3008.

- Wilby, R. L., S. P. Charles, E. Zorita, B. Timbal, P. Whetton, and L. O. Mearns (2004). Guidelines for use of climate scenarios developed from statistical downscaling methods. Technical report, Guideline material for the Intergovernmental Panel on Climate Change.
- Wilby, R. L. and I. Harris (2006). A framework for assessing uncertainties in climate change impacts: Low-flow scenarios for the River Thames, UK. *Water Resources Research* 42(2), W02419.
- Wilcox, P. (2001). Towards a practical method for estimating sediment-transport rates in gravel-bed rivers. *Earth Surface Processes and Landforms* 26, 1395 – 1408.
- Wilcox, R. (1998). A note on the Theil-Sen regression estimator when the regressor is random and the error term is heteroscedastic. *Biometrical Journal* 40(3), 261–268.
- Wilks, D. S. and R. L. Wilby (1999). The weather generation game: a review of stochastic weather models. *Progress in Physical Geography* 23(3), 329–357.
- Willgoose, G. (2005). Mathematical modeling of whole landscape evolution. *Annual Review of Earth and Planetary Sciences* 33(1), 443–459.
- Willgoose, G., R. Bras, and I. Rodriguez-Iturbe (1991). A coupled channel network growth and hillslope evolution model: 1. Theory. *Water Resources Research* 27(7), 1671–1684.
- Willgoose, G., G. Hancock, and G. Kuczera (2003). A framework for the quantitative testing of landform evolution models. In P. Wilcox and R. Iverson (Eds.), *Prediction in Geomorphology*, pp. 195 – 216. Washington D.C.: American Geophysical Union.
- Willgoose, G. R. and S. Riley (1998). The long-term stability of engineered landforms of the Ranger Uranium Mine, Northern Territory, Australia: application of a catchment evolution model. *Earth Surface Processes and Landforms* 23(3), 237 – 259.
- Wobus, C., G. Tucker, and R. Anderson (2010). Does climate change create distinctive patterns of landscape incision? *Journal of Geophysical Research* 115(F4), F04008.
- Wohl, E. (2004). Limitations of downstream hydraulic geometry. *Geology* 32(10), 897–900.
- Wolf, J. and D. K. Woolf (2006). Waves and climate change in the north-east Atlantic. *Geophysical Research Letters* 33.
- Woth, K., R. Weisse, and H. Von Storch (2006). Climate change and North Sea storm surge extremes: an ensemble study of storm surge extremes expected in a changed climate projected by four different regional climate models. *Ocean Dynamics* 56(1), 3–15.
- Wu, S. and M. Hamada (2000). *Experiments: Planning, analysis and parameter design optimisation*. New York: John Wiley & Sons.

- Yates, M. L., R. T. Guza, and W. C. O'Reilly (2009). Equilibrium shoreline response: Observations and modeling. *Journal of Geophysical Research* 114(C9), C09014.
- Young, A. and S. Ashford (2008). Instability investigation of cantelevered seacliffs. *Earth Surface Processes and Landforms* 33, 1661–1677.
- Young, A., R. Guza, R. Flick, W. O'Reilly, and R. Gutierrez (2009). Rain, waves, and short-term evolution of composite seacliffs in southern California. *Marine Geology* 267(1-2), 1–7.
- Yu, D. and S. Lane (2006). Urban fluvial flood modelling using two-dimensional diffusion-wave treatment, part 1: mesh resolution effects. *Hydrological Processes* 20, 1541 – 1565.
- Zeman, A. (1986). Erodibility of Lake Erie undisturbed tills. In M. Skafel (Ed.), *Proceedings of the symposium on cohesive shores.*, Ottawa, pp. 150–169. Natural Research Council of Canada (ACROSES).
- Zhang, K., B. C. Douglas, and S. P. Leatherman (2004). Global warming and coastal erosion. *Climatic Change* 64, 41–58.
- Zorita, E. and H. von Storch (1999). The analog method as a simple statistical downscaling technique: Comparison with more complicated methods. *Journal of Climate* 12, 2474 – 2489.