

# SUBJECT INDEX

## Journal of Coastal Research

### Annual Index Vol 16 (Nos. 1-4) 2000

**A**

*Acropora digitifera*, 102  
*cervicornis*, 689  
*gemmifera*, 102  
*palifera*, 102

Abrasion  
 platform, 861  
 resistance, 929

Accumulation rates, 546

Ace Trezza reef, 1040

Acoustic Doppler Velocimeter (ADV), 261

Actinomycete, 139

ADCIRC  
 boundary conditions, 557  
 finite-element tidal model, 557  
 tidal amplitudes, 557

Advanced Very High Resolution Radiometer (AVHRR), satellite imagery, 823

Aeolian  
 selection process, 900  
 transport, 758

Aerial  
 photographs, 1, 100, 113, 299, 924  
 photography, 388

Afforestation, foredunes, 1069

Age-depth relationship, 193

Agrakhan Peninsula, 201

Agricultural Research Institute, State of Rio Grande do Sul, Brazil, 1069

Airy waves, No.3, vii

Algal blooms, 642

Algorithm functions, 3

Alluvial fans, 818

Alongshore currents, 1152

Alternate direction implicit approach, 1148

Aluminium pebble, electronic pebble tracer methods, 183

Amazon River system, Brazil, 316

Amerada Hess (Atchafalaya Bay, Florida), 999

*Ammonia beccarii*, 646

*Ammophila*  
*arenaria*, 897  
*breviligulata*, 54

Analite backscatterance nephelometer, 1151

Analysis of variance, statistical procedure, 156

Analytical and numerical models, 49

Ancient shoreline, 1039

*Andropogon arenarius*, 1069, ff

Angle of repose, 1105

Annual mean rate of Holocene land subsidence, 29

Anomalously old radiocarbon dates, 1157

ANOVA, statistical procedure, 166

Antecedent topography, 71

Anthropogenic erosion, 990

*Arca pacifica*, 719

Archaeological excavation, 739

*Arenicola marina*, 1012

*Arthrocnemum macrostachys*, 129

Artificial  
 beach nourishment, 387, 728  
 tracers, 926

Ash Wednesday Storm, US Northeast coast, 890

Asymmetric current motion, 847

Atmospheric  
 correction, 998  
 refraction, 115

Atoll lagoon, 776

AVOVA test, statistical procedure, 1105

**B**

*Baccopa monnieri*, 1070

Back-barrier lagoons, 93

Backwash, beach, 255

*Balanus* sp., 713

Barbados corals, 1038

Bar-breaking waves, No. 3, vi

Barchan dunes, 921

Baroclinic tidal effects, 561

Barometric pressure, 885

Barotropic pressure gradient, 1116

Barred foreshores, 1012

Barrier  
 islands, 84, 139, 663  
 reefs and atolls, 776

Bascule bridge, 342

Basic hard bottom algorithm, 6

Bathymetric  
 highs, 537  
 surveys, 880

Bathymetry, Long Island Sound, 569

Beach and dune  
 complexes, 1  
 erosion, 1026

Beach behavior, 49, 801  
 bulldozing, 368, ff  
 crest width, 179  
 cusps, 835  
 development, 173  
 dewatering system, 388  
 durability, 65  
 erosion, 84  
 evolution, 800  
 face, 263, 835  
 grain size, 831  
 length durability, 50  
 morphodynamics, 1019  
 nourishment, 369, 896, 926  
 profile  
 changes, 794, 1012  
 data, 175, 371, 782, 832  
 profiling, 96  
 rehabilitation, 389  
 response, 180  
 retreat, 84  
 ridge topography, 668, 919

sand in frontal dunes, 1071

sediment  
 retention, 180  
 type and size, 263, 353, 1165

state, 55  
 surveys, 175  
 volumetric changes, 880

Beachface, 1012

Beachfill, requirements of, 64

Beachrock formation, 739, 860, 861  
 ledges, 218

Bed  
 conditions, 3, v  
 erosion, 1033  
 liquefaction, 56  
 sediments, 966

Bedform  
 configurations, 55, 1021  
 investigations, 1011

Bedload  
 Transport  
 modeling, 560  
 sediment, 564, 976

Bedrock paleoshorelines, 737

Beige Paleosol, 208

Belgian North Sea Coast, 385

Belizean Barrier Reef, Belize, 689

Benthic  
 assemblages, 630  
 community structure, 630  
 foraminifera, 643

Benthoscape structure, 628

Berm crest, 85

Bioclastic  
 sands, 99  
 sediments, 102

Bioeroding organisms, 685

Bioerosion, 675

Bioerosional signature, 689

Biological sampling, 373

Biomass, 161, 1069

Biotic interactions, 139

Bivariate scatter plots, 902

Black-band disease, coral, 685

Bluff erosion, 543

*Blutaparon portulacoides*, 1069

Boole's mild slope equation, 793

Boring organisms, 685

Bottom and beach sediment composition, 300

Bottom  
 circulation, 537  
 currents, 552  
 friction, 557, 840, 1077  
 sedimentary environments, 548  
 topography, 535, 576, 843

*Brarius*, 370

Brazilian continental margin, 72

Breaker, wave, 1019

Breaking  
 condition, waves, 965

- height, 965  
intensity, 973  
region, iv  
wave characteristics, 248
- Breakwater**  
crest height, 386  
lengths and gaps, 174  
structure, 18, 790, 1073
- Bristol tide gauges, 977
- Britain's Sites of Special Scientific Interest (SSSI), 270
- British Museum Expedition, 1151
- Bruun Rule, 50
- Budget, littoral sands, 756
- Bufo arenarum arenarum*, 1070
- Bulk**  
densities, 169  
metals, 1135  
net cross-shore transport rate, 4
- Buoyant coastal marshes, 164
- Bursea hindsinia*, 714
- Buttressing and aproning, 221
- C**
- Calammophila baltica*, 898
- Calculating beach profile change, 2
- Calibration and verification process, 58
- Caliche, 919
- California Coastal Commission, 1024
- Camera lens distortion, 114
- Canarian Archipelago, Canary Islands, 329
- Canary current, 329
- Canonical correlation analysis (CCA), 279
- Carbon 14 analysis, 127
- Carbonate**  
content analysis, 900  
sands, 678
- Caribbean Islands, 871
- Carolina Capes, 1111
- Caspian Sea level, 196
- Catastrophic hurricanes, 1101
- Caulerpa prolifera*, 330
- Cayrock, 739
- CDIP SRCDM wave model, 1167
- Cell or sand pocket 387
- Cerastoderma edule*, 898, 1012
- CERC Formula, longshore transport equation, 50, 60
- Cercidium peninsular*, 714
- Chapel Hill's Institute for Marine Sciences (IMS), North Carolina, USA, 1114
- Chevron, 1168
- Chinese tallow tree, *Sapium sebigerum* (L), 391
- Chronostratigraphic sequence, 35
- Clear-sky image, 1002
- Cliff**  
erosion, 348  
retreat, 211, 214
- Cliff-forming materials, 1163
- Clostridium perfringens*, concentrations in Long Island Sound, 577, 581, 591, 599
- Closure depth, 53
- Cnoidal wave theory, No. 3, v
- Coalesced fluvial-deltaic plain, 664
- Coarse-grain bedload transport, 539
- Coastal**  
barriers, 78  
bluffs, 1024  
defence scheme, 731
- dune monitoring, 993
- engineering design studies, 3
- environment, 926
- erosion, 111, 199
- estuary, 519
- foredunes, 1068
- geomorphologists and engineers, 800
- geomorphology  
Falterbo Peninsula, southern Sweden, 15  
General study of, 310, 859  
landforms, 859  
management, 926  
plain, 818  
protection work, 800  
reentrances and projections, 79  
sand dunes, 990  
Studies Institute, Louisiana State University, USA, 998  
subsidence, 83  
upwelling, 329  
waters, 40  
Wetlands Planning, Protection and Restoration Act, Louisiana, USA, 164  
zone managers, 385  
zones, 795
- Coastally-migrating sand*, 135
- Coastal-plain strata, 525
- Coast-parallel linear wave ripples, 1014
- Cobble beach, 719
- Cohesionless sedimentary surface, 1011
- Cohesive bottom, 1
- Cold front**  
forcing of water level change, 1001  
related erosion of sediments, 1008
- Cold-vapor Atomic Absorption Spectroscopy, 615
- Collapsing breakers, 837
- Collision regime, 892
- Colubrina glabra*, 714
- Community structure, 678
- Compartmented beaches, 79
- Composition of vegetation, 991
- Computerised wave propagation model, 801
- Concentric bedding sets, 1104
- Concrete tetrahedron, 389
- Conepatus chinga*, 1070
- Conjugate Gradient Method, 1074
- Conocarpus erecta*, 714
- Contaminant**  
geochemistry, 575  
signals, 606
- Contaminants, 551, 575, 606
- Continental shelf, 1167
- Convective dispersion, 973
- Conventional radiocarbon analysis, 1158
- Coral**  
communities, 99  
dredging, 293  
grains, 681  
larvae, 106  
reef environments, 287
- Coralline algae, 1040
- Coral-sand production, 685
- Cores, from drilling, 127, 190
- Coring, 33
- Corophium volutator*, 1012
- Cosmos satellite imagery, 196
- Coulter Counter, sediments, 568
- Crawl Dog, 1098
- Crenulate bay, 18, 23
- Creole Bayou, Louisiana, USA, 165
- Cross**  
sections, 801  
shore variations, 382
- Cross-beds, 1105
- Crossing wave trains, 805
- Cross-sectional area of the channel, 981
- Cross-shore**  
movement of sand, 2  
near-bed tidal flow, 1021  
profiles, 805  
sediment transport, 56, 805  
transport system, 892  
velocity, 260
- Current**  
meter data, 1007, 1114  
ripples, 1017  
speeds, 978
- Current-generated bottom-stress, 581
- Currents, 880
- Cusped delta, 202
- Cyclonic surges, 26
- Cymodocea nodosa* (Ueria) Ascherson, 297, 330
- D**
- Datawell buoy, Waverider, 879
- Debris apron, 859
- Deep**  
peats, 165  
return flow, 564
- Deep Sea Drilling Project (DSDP), 928
- Deep water waves, No.3, iv
- Deepwater, significant wave height, 831
- Deformation of wave height, 967
- Delft Hydraulics Laboratory Deltaflume, The Netherlands, 698
- Deltaic and lake-bottom deposits, 526
- Density**  
driven circulation, 554, 564  
gradient, 966  
structure, 552
- Depositional sequences, 818
- Depth integrated mean velocities, 970
- Depth-averaged currents, 561
- Design wave, 56
- Detached offshore breakwaters, 172
- Diadema*  
*antillarum*, 685  
*mexicanum*, 712
- Diffraction of monochromatic waves, 871
- Digital**  
satellite data, 998  
terrain models, 176
- Dikes**, 385
- Discharges from rivers, 591
- Dissipation coefficient, 967
- Dissipative beaches, 261
- Distribution of organic carbon, 1141
- Dominant direction of wave approach, 1028
- Donas vittatus*, 898
- Doppler**  
current profilers (ADCP's), 864  
velocity data, 865
- Downdrift erosion, 5, 1096
- Drag coefficient, 1065
- Dredging, 45
- Dried leaf material, 156
- Driftwood, 1088
- Dry beach, 263
- DSDP semi-quantitative method, 928

- Dugong (*Dugong dugong*), 293
- Dune  
 barrier, 214  
 crest, 141  
 ecology, 1070  
 field, 919  
 profiles, 758  
 ridges, 919  
 slope, 141  
 vulnerability index, 992  
 water table, 1069
- Dunefields, 859
- Dune-like bedforms, 703
- Dunes, 859, 1017
- Dusiçyon gymnocercus*, 1070
- Dutch North Sea beaches, 892
- Dyes, 880
- Dynamic  
 equilibrium, 18  
 stability parameter, vii
- Dynamical processes No. 3, iii-iv
- E**
- Earth Scan Laboratory, Louisiana State University, USA, 998
- Earthquakes, 856, 1085
- East Australian Current, 1154
- Ebb  
 tidal currents, 847  
 velocity, 982
- Ebbing water, 1017
- Ebb-tidal deltas, 668
- Ecological  
 consequences, 369  
 zonation, 99
- Edge marshes, 169
- EDM (Electronic Distance Measurement), 897
- Effective fetch, 807
- Eggerella advena*, 645
- Eigenfunction expansion, 871
- Eijkelpomp augers, 127
- El Niño  
 conditions, 85, 663  
 events, 346  
 Southern Oscillation, ENSO, 1022, 1168  
 years, 1069
- El Vizcaino biosphere, 1134
- Electromagnetic current meter, 317, 843
- Electron probe microanalyser, 360
- Elevated sea levels, 1024
- Elphidium excavatum clavatum*, 646
- Elphidium*  
*excavatum*, 642  
*incertum*, 643
- Embayed coastline, 79
- Emergent remnants, 735
- Empirical eigenfunction model, 792
- Enclosed pools, 292
- Engineering  
 design of beach fills, 1  
 models, 49  
 structures, 55
- ENSO events, 1022
- Entobia ichnofacies*, 1041
- Environmental interpretations, 743
- Environments  
 coarse-grained bedload transport, 538  
 erosion or nondeposition, 538  
 fine-grained deposition, 539  
 sediment sorting and reworking, 539
- Episodic displacement downriver, reworked sediment, 1159
- Equilibrium  
 beach profile model, 263  
 bedforms, 700  
 profile, 6, 49  
 shoreface profile, 50
- Erodona mactroides*, 817
- Erosion rates, 111
- Erosional  
 regime, 217  
 unconformity, 753
- Estuarine  
 coastal saltmarsh, 909  
 saltmarsh canopy plants, 913  
 systems, 125  
 tidal prisms, 983
- Estuary Coastland Ocean Model (ECOM), 557
- Estuary hydrodynamics, 976
- Etnean clays, 1040
- Eucalyptus saligna*, 1069
- Eulerian methods, 864
- Evanescent models, 872
- F**
- Factor analysis, 580
- Fair-weather periods, 880
- Family-level variation in survival, 157
- Family-specific diameter increments, 158
- Faunal groups, 630
- Fe and/or Mn oxide crusts, 1050
- Fecal coliforms, 40
- Federal Emergency Management Agency (FEMA), 1026, 1168
- Feeder berm, 387
- Fe-Mn oxihydroxides, 1133, 1138
- Ferric hydroxide coatings, 898
- Fetch, waves, 1063
- Fill sand, 929
- Film deformation, 114
- Fine-grained  
 detritus, 545  
 sediments, 546
- Finite element methods, 1074
- Fischer linear discriminant analysis (LDA), 61
- Fish-tail groynes, 726
- Fit of a model, No. 3, iii-iv
- Fixation of nitrogen, 139
- Flandrian transgression, 1180
- Flat  
 bed, 965  
 pebble clasts, 929
- Flexible geo-textile curtain, 389
- Flood  
 risk, 276  
 shoal, 850  
 tidal currents, 847  
 velocity, 981
- Florida Keys National Marine Sanctuary, USA, 678
- Flotant, 164
- Flotsam, 1105
- Flow velocities, 981
- Fluid drag, 1011
- Fluorescent tracer, 182
- Fluvial  
 fluviodeltaic deposits, 526  
 sediments, 1104
- Foraminifera, 642
- Forced breaking waves, 3, iv
- Forcing parameter, 783
- Forearc uplift mechanism, 743
- Forefune, 991
- Foresets, 1105
- Foreshore  
 shore face, 260, 892  
 slope, 831
- Fortran Interpretation of Sediments and Hydrodynamics (FISH), 806
- Fossil pollen and seed assemblages, 189
- Fossil-coral hardbottom, 685
- Fouquieria diguetii*, 714
- Free  
 coasting waves, 3, iv  
 soil water salinity and temperature, 155
- French nuclear test sites, 777
- French Polynesia, 777
- Frictional dissipation of wave energy, 57
- Frontal dune, 991
- Functional type, 992
- G**
- Gamma-emitting radioisotopes, 596
- Ganges-Brahmaputra delta, India, 26
- Gap erosion, 173, 181
- Garbage dumping, 218
- Gauging station, 125
- Gaussian elimination method, 1074
- Generalized Conjugate Gradient, (GCG), 1074
- GENESIS, computer model, 17, 50
- Geochemical, partitioning of metals, 1133
- Geochemistry of sediments, 1133
- Geological Survey of Canada, 750
- Geopetal peloidal sediment, 1045
- Geophysical  
 methods, 1091  
 surveys, 34
- Geotypes, 161
- GIS  
 compatible output, 801  
 strategy, 119
- Glacial deposits, 523
- Glacial Lake Connecticut, 526, ff
- Glacial-lake deposits, 523
- Glauconite, 1143
- Global change, 1083
- Global sea-surface anomalies, 86
- Gores, 129
- Grab samples and videocamera observations, 537
- Graben, 855
- Grain  
 roughness parameter, 705  
 size parameters, 55, 323, 899  
 types, 712
- Grand Riviere, North Martinique Island, 879
- Granite groin, 342
- Granulometric moments, 1104
- Great Barrier Reef (GBR), Australia, 151, 287, 777
- Gravity waves, No. 3, vii
- Greenhouse effect, 1182
- Greenland Ice Sheet, 307
- Grobe Wellen Kanal (GWK), 7

Groin fields, 385, 1096  
 Groins, seawalls, and beach nourishment impact, 55  
 Ground control, 122  
 Groundwater seepage, 263  
 Gulf Intracoastal Waterway, USA,  
 Gullies, 213  
 GWK data, 8

## H

*Halimeda* spp., 678  
*Halimione portulacoides*, 129  
*Haliotis kamtschatkana*, 768  
*Halophila*  
*avails*, 293  
*decipiens*, 332  
 Hard  
 bottom, 1  
 corals, 1155  
 Harmonic analysis, 980  
 Harvest platform, 1168  
 Heavy  
 mineral laminae, 1103  
 minerals, 898  
*Heleobia australis*, 817  
 Hg  
 abundances in LIS surface sediments, 613  
 concentration, 615  
 High saltmarsh, 130  
 High tide levels, 985, 1028  
 High-resolution subbottom profiling, 33  
 Hindcasting of Shallow Water Waves (HISWA), 801  
 Hindsighting, 58  
 Hinge zone, 34  
*Hippophae rhamnoides*, 898  
 Hiray flooding flat, Baja California Sur, Mexico, 916  
 HISWA (Hindcast Shallow Water Waves), 568, 884  
 HLJ1-Printing Electro-magnetic current meter, 910  
 Hodograph descriptors, 1115  
 Holocene  
 deltas, 1157  
 dune systems, 758  
 marine limit, 307  
 mud and sand facies, 32  
 sea level change, 1037  
 section, 1127  
 transgression, 135, 1024  
 uplift history of the Sicilian coastline, 1037  
 Hot spots, 145  
 Hs-Tz relationship, 784  
 Hummocky cross-beds, 1104  
 Hurricane  
 Andrew, 892  
 Bertha, 879  
 conditions, 880  
 Georges, 823  
 Iris, 879  
 Kate, 1102  
 Luis, 879  
 Marilyn, 879  
 of 1926, 337  
 Hydraulic  
 conductivity, 263  
 engineering, 970  
 equivalence, 929

Hydrochloric acid test, 361  
*Hydrocotyle bonariensis*, 1070  
 Hydrodynamic  
 conditions, 300, 1011  
 modeling, 843  
 parameters, 801  
 processes, 909, *ff*  
 scenarios, 801  
 Hydro-isostasy

## I

Ice-complex formation, 1086  
 Impermeable structure, 383  
 Incident waves, 379  
 Incipient breaker height, 969  
 Inclined coastal structure, 379  
 Infaunal assemblages, 638  
 Infiltration-exfiltration, 263  
 Infragravity waves, 57, 258  
 Infrared aerial photographs, 100  
 Inlet jet, tidal current, 1120  
 Instituto Nacional del Investigaciones Geologico-Mineras de Colombia (INGEOMINAS), 663  
 Intertidal  
 barred foreshores, 1011  
 beach, 371  
 mangrove area, 981  
 Intracoastal Waterway (IWW) system, USA, 842  
 Intraspecific variation, 158  
 Inundation regime, 892  
 Invading species, 391  
*Inyssa aquatica*, 153  
 Iribarren number, 891  
 Island geometry, 669  
 ISCO automatic water samples, 999  
 Isopach map, 17  
 Isotopic dates, 132

## J

*Jatropha cunneata*, 714  
 Jetties, 841, 850  
 Joint Distribution Models, 783  
*Juncus*  
*acutus*, 1070  
*roemerianus*, 41

## K

Kabira Channel, 101  
 Kelp  
 densities, 771  
 derived carbon, 773  
 habitat management, 769  
 Key Largo Limestone, National Marine Sanctuary, 678  
 Kinematic stability parameter, vii  
 Krummholz, 714  
 Kurkar, 210

## L

Labile fractions, 1138  
 Lag deposits, 527  
 Lagoons, 17

Lagrangian drifter buoys, 1116  
 Laminar samples, 1103  
 Lanczos cosine taper filter, 1114  
 Land change rates, 165  
 Land-Ocean Interactions, LOI, 1083  
 Laptev Sea, 1083  
 Last Glacial Maximum (LGM), 306  
 Late  
 Holocene submergence, 312  
 Wisconsinan Laurentide Ice Sheet, 568  
 L.C.H.F. (Laboratoire Central d'Hydraulique de France), 759  
 Lena River Delta construction, 1086  
 Leveling, beach profiles, 728  
 Limestone cliffs, 1039  
 Linear regression, 999  
 Linear  
 water wave transformation, 1073  
 wave theory, 382  
*Liolaemus occipitalis*, 1070  
 Lithified  
 dune deposits, 721  
 seacliffs, 1162  
*Lithophaga*  
 borings, 1059  
 radiometric dates, 1058  
*Lithophyllum pustulatum*, 1040  
 Lithostratigraphic  
 analyses, 357  
 characteristics, 32  
 Little Climatic Optimum, 1180  
 Littoral  
 drift, 79, 300  
 environment, 247  
 Long Island Sound estuary, 535, 541  
 Long waves, 256  
 Longcores, 27  
 Longer-term evolution, beaches and barrier islands, 55  
 Long-period ocean waves, 85, 256  
 Longshore  
 currents, 249, 299, 808, 990, 1017  
 length, 50  
 sediment transport equation, 51  
 sediment transport, 249, 1089  
 Long-term seacliff erosion rates, 1165  
 Longuet-Higgins equation, 249  
 Looe Key National Marine Sanctuary, Florida, USA, 678  
 Louisiana Coastal Wetlands Restoration Plan, 164  
 Louisiana estuaries, 999  
 Low wooded islands, 287  
 Low-cost of floating breakwaters, 386  
*Lumbrineris tetraura*, 281  
 Lunar semidiurnal tide, 537  
*Lystrophis dorgignyi*, 1070

## M

M<sub>2</sub> tidal constituent data, 557, 842, 986  
*Macoma balthica*, 1012  
 Macroalgae, 102  
*Macrocystis integrifolia*, 768  
 Macroinfauna, 280  
 Macrotidal shallow estuaries, 976  
*Magelona pettiboneae*, 282  
 Magmatic arc, 738  
*Mammillaria* sp., 714  
 Mangrove  
 banks, 977

- ecosystem, 26, 291  
forests, 36  
platform, 668  
Mann Whitney test, statistical procedure, 901  
Map accuracy, 113  
Mapping marine habitats, 100  
Marateca channel, 129  
Marsh-McBirney electro-magnetic current meters, 999  
Marine  
  coastal systems, 627  
  deltaic facies, 539  
  environment, 293  
  phanerogams, 297  
  protected areas, 769  
  transgression, 71  
Marsh  
  mats, 169  
  outcrops, 892  
Matter content, 279  
Maximum  
  tidal fluctuation, 1166  
  significant wave heights, 1024  
Mean grain size, 1158  
Mean momentum flux, 803  
Mediterranean climate, 990  
*Megapitaria squalida*, 712  
Meristem dieback, 156  
Merizo Limestone, 738  
Messina fault, 1038  
Metal  
  concentration and distribution, 581  
  partitioning, 1136  
Meteo France (French National Meteorological Services), 879  
Meteorological data, 1114  
Metric mapping, 119  
Miami Limestone, 678  
Micritic cements, 1040  
Micronesia, 735  
Micropaleontological analyses, 28  
Microscopic fluid motions, 965  
Microtidal  
  coastal region, 996  
  coasts, 877  
Microtopography, 141  
Migrating bedforms, 541  
Migration trend, 20  
Milankovitch model, 1182  
Milencatan Limestone, 738  
Miles scattering matrix, 870  
Mineral crusts, 1046  
Minimum Description Length (MDL) algorithm, 145  
Mississippi River, 164  
Mn-Fe mineral crusts, 1050  
Moat, 106  
Models, shoreline evolution, 255  
Modern reef tract, 678  
Modified saltation, 906  
Molluscan particles, 679  
Monochromatic waves, 11, 57, 701, 870  
Monospecific stands, 391  
*Montipora digitata*, 102  
Morehead City Ship Channel, North Carolina, USA, 1113  
Moreton Bay Strategic Plan, Queensland, Australia, 293  
Morphodynamic  
  behavior, 832  
  parameters, 801, 838, 1086  
Morphodynamical models, shallow estuaries, 986  
Morphologic characteristics, dunes, 55  
Morphological impacts of hurricanes, 1100  
Mosquito Lagoon, 843  
Mostardas, 73  
Mount Etna volcano, 1059  
Mucky clays 165  
Mud  
  assemblage, 630, 965  
  flat, 202, 965  
Muddy  
  prodelta, 750  
  tidal channels, 1146  
Mud-water interfacial wave, 966  
Multi-grid method, 1074  
Multiple wave trains, iv  
*Myrica cerifera*, 139
- N**
- Nabkha dunes, 922  
Namibian shelf, 1133  
Narragansett Pier Plutonic Suite, 525  
National Coastal and Marine Geology Program, USA, 551  
National Geodetic Vertical Datum (NGVD), USA, 17  
National Weather Service, (NWS), USA, 823  
Native  
  beach sands, 929  
  sediments, 892  
Natural  
  barrier islands, 890  
  levee edge marshes, 169  
  tracers, 926  
Near-bed suspended sediment concentrations, 255  
Near-bottom nepheloid layer, 1152  
Nearshore  
  breaking waves, 808  
  hydrodynamic models, 793  
  processes, 800  
  sediment budget, transport, 77, 830  
  step, 3, v  
Nearshore Wave Generation and Propagation Model (STDGRW), 20  
Neotectonics, 33  
*Nereis diversicolor*, 1012  
*Nereocystis luetkeana*, 768  
Net transport, 1001  
New York metropolitan area, 568  
Newton method of non-linear curve-fitting, 998  
Nile and Ganges Brahmaputra deltas, India, 358  
Nitrate concentration, 43  
NOAA  
  AVHRR Satellite reflectance measurement, 998  
  National Ocean Service, (NOS), 1113  
NOAA-14 reflectance images, 1004  
Non deltaic geomorphological units, 1084  
Non-erodible bottom, 1  
*Nonion commune*, 646  
Non-parametric statistical tests, 900  
Nontidal estuarine circulation, 537  
Normalization of the metals data, 585  
Norte winds, 721  
North American Vertical Datum of 1988 (NAVD88), 3, viii
- North Carolina State University (NCSU), USA, 1113  
Northeast Trade Wind, 329  
Northern Hemisphere swells, 1166  
Norwalk shoal complex, USA, 526, 628  
NOS  
  harmonic analysis, 844  
  stations, 1113  
  T-sheets, 112  
Notch features, 1050  
Nourishments, beach replenishment, 1098  
Numerical modeling, 20, 554, 801, 871  
Nutrient infiltration, 687
- O**
- Ocean high tide level, 982  
Oceanside littoral cell, 1167  
*Ocypode quadrata*, 370  
Offshore  
  breakwaters, 726  
  deposits, 896  
  structures, 218  
  transport, 97  
Ohio shoreline, Lake Erie, 927  
Old-carbon contamination phenomenon, 1159  
Oligohaline zone, 165  
Omni-directional currents, 803  
One way ANOVA, statistical procedure, 992  
Open-marine environments, 571  
*Ophium volutator*, 1012  
Optical backscatter sensor (OBS), 261, 317  
Orbital velocity amplitude, 701  
Organic  
  carbon, 323, 1134  
  matter content, 279  
*Organic-rich layers*, 129  
Orthogonal Grid Mapping System (OGMS), 117  
Orthogonal sediment transport, 805  
Oscillatory flow dynamics, 563, 1011  
*Ovalipes ocellatus*, 370  
Overtide, 980  
Overwash  
  Characteristics of, 54  
  facies, 672  
  fans, 1101  
  sediment, 667  
Oxidizing environments, 93
- P**
- P<sub>2</sub>O<sub>5</sub> analysis, 1134  
Pacific highstand, 737  
Paleobeachrock forms, 738  
Paleoenvironmental analyses, 28, 675  
Paleonotches, 739  
Paleoshoreline  
  features, 735  
  notches, 741  
Paleosols, 211  
Palynological analyses, 28  
*Panicum racemosum*, 1069  
Parametric models, 825  
Partial standing waves, 379  
Particle aggregates, 541  
*Paspalum vaginatum*, 1070  
PBCG Model, 1076  
Peak wave period (Tp), 879  
Peat layers, 36

- Permeable breakwaters, 386  
 Peterson dredge sampler, 679  
 Petrographic study, 1048  
 Petrography studies, 927  
 pH level, 158  
 Phosphate uptake, 780  
*Phyla canensis*, 1070  
 Plane bedded beachface, 1012  
 Planktonic primary productivity, 649  
 Pleistocene surface, 135  
*Pleurodema darwini*, 1070  
*Pluchea sagittalis*, 1070  
 Plume  
   orientation, 1001  
   size, 1001  
 Plunging breakers, 837  
 PMH Model, 1076  
 Pocket  
   bays, 721  
   beach, 387  
 Point measurement, 117  
 Point-source attenuation of tidal motion, 851  
 Polar-orbiting satellite (NOAA-14), 823  
 Polders, 1180  
 Pollen record, 656  
 Pollution, 40  
 Pontoons and floating breakwaters, 386  
*Posidonia oceanica* (L.) Delile, 297, 303  
 Postglacial erosion, 526  
 Post-Glacial Marine Transgression (PMT), 71  
*Potamogeton perfoliatus*, 191  
 Preconditioned Bi-Conjugate Gradient (PBCG) Method, 1074  
 Principia-Monaco process, 389  
*Prionospio pygmaea*, 281  
 Probability based models, 782  
 Profile response model, 3  
 Progradational beach ridges, 667  
 Proxy, for shoreline position, 116  
*Pterygophora californica*, 768  
 Puerto Rican reef, 100  
 Push cores, 89
- Q**
- Quaternary  
   thermotectonic subsidence, 737  
   sediments, 1084  
 Quiet water  
   regions, 641  
   corallines, 1040  
*Quinqueloculina seminula*, 646
- R**
- Radiation stress, 805, 812  
 Radiocarbon dates, 358, 737  
 Radiocarbon-dating method, 1126  
 Radiometric date, 29  
 Ramp, 1088  
 Rate of erosion, 763  
 Rayleigh and Weibull distributions, 3, iv  
 Rayleigh  
   distribution 784  
   optical depth, 998  
   scattering, 998  
 RCP wave, 1076  
 RDE Model, 1076  
 Reed growth, 199  
 Reed-covered flat, 199
- Reef  
   debris, 1044  
   ecosystem, 675, 678  
   edge, 101  
   features, 1051  
   flat characteristics, 289  
   framework, 1055  
   materials, 738  
   nutrient paradox, 776  
   sediment, 1044, 1055  
   vitality, 689  
 Ref/Dif-1 model, 1077  
 Reference borings, 358  
 Reflective/dissipative scale, 805  
 Regional scale sediment budgets, 51  
 Regional  
   sea level oscillation, 818  
   sediment geochemistry, 1141  
   textural map, 570  
 Relative  
   phase angle, 980  
   sea level (RSL), 306, 1166  
 Relic scarps, 672  
 Relict worm rock, 4  
 Renourishment  
   factor, 51  
   sediments, 88  
 Residual bottom currents, 537  
 Reversal of tide, 1017  
 Reverse Bruun Rule, 60  
 Revetment, 8, 353  
*Rheophax dentaliniformis*, 646  
*Rheophaxnana*, 646  
 Rhodoliths, 709  
 Rhone River, deltaic plain, 1157  
 Rhythmic undulation, 1011  
 Ria Formosa barrier island system, Algarve, Spain, 831  
 Ridge and runnel, 1012  
 Ridge-crossing gullies, 214  
 Ridges, 668  
 Rip currents, 809  
 Ripple  
   height, 702  
   leeside, 1013  
   scour depressions (RSD), 96  
 Ripples and dunes, 1011  
 Riverbed, 324  
 Riverborne sediments, 998  
 Root elongation, 161  
 Root symbiont, 140  
 Rotating cup anemometers, 899  
 Rouse-type coefficient, 701  
 Runnel  
   foreshore, 1011  
   topography, 1011  
 Run-up excursion, 257  
 Runup, 350  
 R/V Aljandra de Humboldt, 1134
- S**
- Sabellariid worms (*Phragmatopoma caudata*), 1  
 Sabkha deposits, 917  
 Sado Estuary, Portugal, 125  
 Salinity fluctuations, 43, 1007  
 Salinity-related stratification, 648  
 Salt tolerance indices, 161  
 Saltation layer, 906  
 Saltmarsh  
   canopy, 909  
   tidal creeks, 909  
 Salt-trap, 715  
 Saltwater  
   intrusion, 153, 164  
   lagoon, 743  
 Salyut space station, 196  
 Sand  
   conservation, 6, 54  
   fence deposit, 901  
   patches, 1  
   removal, 218  
   sheet, 922  
   spits, 818  
   sucker dredge, 344  
   transport, 899  
   traps, 899  
   waves, 539  
 Sandflat, 1011  
 Sand-tongues  
 Sandy  
   beaches, 368, 790  
   rippled runnel, 1013  
*Sarcocornia fruticosa*, 129  
*perenne*, 129  
 Satellite  
   imagery, 34, 1007  
   significant wave height, 778  
 Satellite-acquired visible band date, 998  
 SBEACH, 3, 50  
 Scale-dependence, 8  
 Scanning electron microscope (SEM), 596, 928  
 Scarping, 919, 1102  
*Scirpus mariquete*, 910  
 Scour, 5  
 SCUBA diving, 330  
 Sea Surface Temperature (SST), 330  
 Seacliff  
   notches, 739  
   State Beach, 1024  
 Sea-floor  
   environments, 627  
   sedimentary environments, 551  
   topography, 535  
   lag deposit, 539  
 Seagrass meadows, 329  
 Seagrass-dominated ecosystems, 303  
 Seagrasses (marine phanerogams), 297  
 Seal colonies, 15  
 Sea-level rise model, 136  
 Seasonal  
   episodes of anoxia, 652  
   stratification, 641  
 Seawalls, 8  
 Seaweed-encrusted coarse gravel, 570  
 Sediment  
   budget, 764, 882, 927  
   characteristics, 88  
   cores, 594  
   diffusivity, 705  
   erosion, 541  
   floc, 190  
   fluxes, 1005  
   grain-size, 299  
   mixing depth, 830  
   resuspension and transport, 706, 1007  
   sequences, 135  
   texture, 551, 1104  
   trains, 764  
   transport, 753

- volume changes, 880
  - Sedimentary structures, 323
  - Sedimentological analyses, 28
  - Seed abundance, 190
  - Seedling establishment patterns, 140
  - Seismic
    - profiles, 34
    - reflection, 816
  - Seismicity, 856
  - SEM-EDS methods, 928
  - Semi-diurnal
    - mesotidal coast, 990
    - tides, 316, 977
  - Semi-enclosed
    - estuaries, 575
    - marine areas, 591
  - Semi-reflective beaches, 813
  - Sequence, bedforms of the ridge and runnel foreshore, 1018
  - Setup gradient, 969
  - Severity, storm damage, 1035
  - Severn River, Chesapeake Bay, USA, 188
  - Sewage
    - input, 652
    - sources, 576
    - tracer, 606
  - Sewage-derived pollutants, 607, 623
  - Shallow water waves, 3, iv
  - Shapiro-Wilk normal probability test, 165
  - Shear velocity, 803
  - Shellfishing, 40
  - Shell-rich layers, 129
  - Shoal zone, 59
  - Shoaling
    - regions, 782
    - waves, 1019
  - SHOALS lidar system, 843
  - Shore Protection Manual, 805, 1063
  - Shore-breaking
    - numerical continuum, No. 3, vii
    - position, No. 3, v
    - wave profile distortion, No. 3, viii
  - Shoreface morphology, 1167
  - Shoreface
    - profile of equilibrium, 49
  - Shoreface
    - slope, 56, 1168
    - Translation Barrier Model (STM), 71
  - Shoreline
    - armoring, 1033
    - displacement, 259
    - erosion, 368
    - mapping techniques, 111
    - retreat, 1162
  - Sidescan-sonar system, 56, 537
  - Sieve-analysis data, 716
  - Significant
    - breaking wave heights, 835
    - tidal range, 978
  - Significant wave height ( $H_s$ ), 249, 882, 891
  - Siliclastic sand, 1048
  - Simulated bedload transport, 562
  - Slump scars, 208
  - Small Amplitude Wave Theory, 3, vii
  - Small-scale physical sedimentary structures, 1016
  - Soft bottom benthic communities, 278
  - Soft corals, 1155
  - Soft-sediment communities, 638
  - Soil
    - chlorides, 141
    - nutrient levels, 158
    - profile, 168
    - samples, 155
  - Solitons, 3, vi
  - Sonographs, 537
  - Sorted sediments, 541
  - Southern Brazilian foredunes, 1070
  - Spartina*
    - alterniflora*, 41, 910
    - cilata*, 1070
  - Spatial distributions of the anthropogenic elements, 581
  - Species diversity, 992
  - Spilling breaker, 837, 966
  - Spisula* sp., 898
  - Spoil banks, 164
  - Spring tide, 130, 981
  - Spring-tide washover, 83
  - Stable berms, 387
  - Stained quartz, 360
  - Static equilibrium shoreline, 18
  - Steady-state wave heights, 560
  - Stepwise regression, No. 3, vii
  - Stereo zoom transfer scope, 117
  - Stereoscopic techniques, 916
  - Sticky marine snow flocs, 1152
  - Still Water Level (SWL), 379
  - Stillstand, 1051
  - Storm
    - debris, 1102
    - protection, 1
    - Storm surge, 349, 1089
    - Storm-induced beach and dune erosion, 51
  - Stranded bars, 1102
  - Stratford shoal complex, 526, 628
  - Stratigraphy, based on cores, 668
  - Strongloccentrotus*
    - droebachiensis*, 770
    - franciscanus*, 768
  - Structural changes, plant populations, 1071
  - Subaqueous dunes, 1013
  - Subbottom (boomer) profiles, 537
  - Sub-bottom reflectors, 818
  - Submarine valley, 855
  - Submerged shoal, 667
  - Submergence, 31
  - Submersed aquatic vegetation (SAV), 188
  - Subsidence, 30
  - Sub-tropical storms, 1166
  - Summer beach, 149
  - Superelevation, 257
  - Surf and swash, 1019
  - Surf
    - observations, iv
    - scaling parameter, 838
    - similarity parameter, 838
    - zone
      - characteristics, 248
      - dynamics, 965
      - morphodynamics, 801
      - parameters, 966
      - sediment transport, 800
  - Surface
    - roller, 966
    - turbidity patterns, 1002
  - Surficial sediment, 567
  - Surge, 882
  - Surging waves, 57, 82
  - Suspended sediment
    - concentration, 261, 911, 1152
    - profiles, 36, 317
  - Swamp, 291
  - Swash
    - action, 1017
    - bars, 1105
    - depth, 259
    - height and wave setup, 259, 891
    - motion, 258
    - regime, 892
  - Swash-range, 256
  - Swash-zone
    - hydrodynamics, 255, 257
    - processes, 255
  - Swell waves, 759
  - Synoptic measurements, 843
- ## T
- Tabular cross-beds, 719
  - Talitrus saltator*, 1012
  - Talus apron, 212
  - Tanapag limestone, 738
  - Taormina, 1039
  - Taxodium distichum*, 153
  - Technical Services of the Conseil General of Marinique Island, 879
  - Tectonic uplift, 1048
  - Tectonism, 1085
  - Teflon-coated flat-bottom scoop, 594
  - Tellina tenuis*, 1012
  - Terrigenous organic matter, 818
  - Tharyx*, 281
  - Thermocline, 1027
  - Thermokarst processes, 1091
  - Threshold peak wave shear stress, 701
  - Tidal
    - amplitude, 851
    - attenuation, 850, 978, 985
    - channels, 539
    - currents, 57, 552
    - cycle, 1017
    - datum planes, No. 3, viii
    - elevation asymmetry, 979
    - flats, 919
    - peaks, 1115
    - periods, 866
    - prism, 336, 983
    - range, 57
    - waters, 43
    - wave propagation, 840, 979
  - Tide-dominated coastal depocenter, 26
  - Tide gauge and river discharge data, 977, 999
  - Tide-generated bedforms, 1020
  - Timber bulkhead, 1035
  - Time averaged volume flux, 382
  - Time
    - lapse photography, 257
    - range plots of vector currents, 868
    - series, 927, 1003
  - Time-versus-depth curves, 193
  - Tombolo, 17, 173
  - Topex/Poseidon satellite measurements, 777
  - Topographic
    - maps, 916
    - surveys, 880
  - Total organic carbon (TOC), 571, 1158
  - Tracer experiments, 835
  - Trade wind intensification conditions, 880
  - Transgression, 311, 1086
  - Transgressive changes, 204
  - Transitional water waves, iv
  - Transverse dune field, 915
  - Trellis drainage, 668

- Trend of global warming, 1180  
 Triassic evaporites, 854  
*Trichum trigrum*, 1070  
*Trochammina*  
   *macrescens*, 646  
   *squammate*, 646  
 Tropical  
   cyclone, 825  
   storms, 880  
 Tsunamis, 85  
 Tukey's multiple range test, statistical procedure, 1069  
 Turbid water, 998, 1007  
 Turbidity currents, 43, 57  
*Turbo fluctuosus*, 712  
 Turbulence field, 965  
 Two way lateral inlet flow field, 1120  
*Typha domingensis*, 1070  
 Typhoons, 107  
 Tyrrhenian warm episodes, 1057
- U**
- U.S. Army Corps of Engineers, 3, 999, 1168  
 U.S. Geological Survey  
   Coastal and Marine Geology Program, 519  
   Mini Image Processing system (PIPS), 632  
 Undertow, 970  
*Uniola paniculata*, 54  
 Uplift patterns in Eastern Sicily, 1059  
 Uplifted Tyrrhenian terraces, 861  
 Upper beach, 667  
 Uprush, 255  
 Uprush-backwash cycle, 262  
 Upwellings, 1027, 1143  
 USGS quadrangles, 112
- V**
- Van Veen grab sampler, 568, 594, 1134,  
 VARIMAX orthogonal rotation, 578  
 Vertical  
   mixing, 966  
   movement of marsh substrate buoyancy,  
     165  
   profile of velocity, 1147  
 Very High Resolution Radiometer (AVHRR),  
   330  
 Vibracores, 537, 816  
 Visco-elastic material, 967  
 Volcanic archipelago, 329  
 Volumetric  
   analysis, 176  
   transport rates, 185  
 Vortex ripples, 703  
 Vulnerability index, 991
- W**
- Washover, 82  
 Water samples, 41  
 Watertable, 56, 256, 262  
 Wave  
   breaking criterion, 967  
   climate, 782, 1166  
   cut benches, 861  
   damages, 1027  
   date description and definition, iii  
   decomposition, vi  
   direction, 879  
   dissipation, 967  
   energy  
     densities, vii  
     dissipation, 812, 1168  
   front, 966  
   gauges, iv  
   generation and propagation model (WAVAD), 15  
   hammering, 1175  
   height, 369, 784, 803, 8791078,  
   length, v  
   measurements, 879  
   modeling, 558  
   parameters, 803  
   period, 3, iv  
   power, 1171  
   probes, 966  
   radian frequency, 805  
   reflection, 57  
   refraction/diffraction/shoaling modeling,  
     1168  
   run-down, 256  
   run-up height, 256  
   set-up, 256, 803  
   shadow, 733  
   steepness, 786  
   swash, 212  
   transformations, 57  
   vectors, 1079  
 Wave-current interactions, 57  
 Wave-cut  
   notch, 212  
   shore platforms, 1024  
 Wave-driven currents, 555  
 Wave-generated ripples, 1013  
 Wave-generating winds, 351  
 Wave-induced erosion, 1162  
 Wave-mixing coefficient, 705  
 Wave-produced currents, 537  
 Waverider buoy, 248  
 Wave-rippled runnel, 1012  
 Waves and nearshore current fields, 795  
 Weir, 342, 841  
 Wet/dry boundary, 116  
 Wetland loss, 164  
 White-band disease, 685  
 Wilcoxon Rank Sum test, statistical procedure, 41  
 Wind and wave interaction, 1063  
 Wind and wave-driven bottom currents, 537  
 Wind  
   field, 712  
   forcing of water level changes, 999, 1122  
 Wind-driven  
   bottom currents, 563  
   circulation, 554  
   surges, 197  
 Wind-induced set-up, 1027  
 Wind-laid sand, 898  
 Wind-stress determination, 1065  
 Wind-wave interaction studies, 1065  
 Winter storms, 1008  
 Wisconsinan glaciation, 526  
 Wooden groins, 338
- X**
- X-radiographs, 594, 605  
 X-ray diffraction (XRD), 359, 928
- Y**
- Yangtze River  
   cores, 1127  
   deltaic facies, 1126
- Y**
- Zannichellia palustris*, 191  
 Zero  
   crossing waves, 787  
   wave energy, v  
 Zone mechanics, 800  
 Zoom transfer scope and GIS, 117, 119  
*Zostera*  
   *capricorni*, 293  
   *noltii*, 332