

Michael S. Longuet-Higgins
Bibliography

Chronological List of Publications of Michael S. Longuet-Higgins FRS

(1948-2016)

1948

Water movements and earth currents; Electrical and magnetic effects. *Nature*, Lond. 161, 192 (with N.F. Barber).

Sea waves and microseisms, *Nature*, Lond. 162, 700 (with F. Ursell).

1949

The electrical and magnetic effects of tidal streams, *Mon. Not. R. Astr. Soc.*, *Geophys. Suppl.* 5, 285-307.

The generation of microseisms by sea-waves, *Proc. I.U.G.G. Assembly, Assoc. S'cis. M'et'eorolog. Oc'eanogr. Phys.*, Oslo, pp. 17-18.

1950

A theory of the origin of microseisms, *Phil. Trans. R. Soc. Lond. A* 243, 1-35.

1951

An experimental study of the pressure variations in standing water waves, *Proc. R. Soc. Lond. A* 206, 424-435 (with R.I.B. Cooper).

1952

Can sea waves cause microseisms? *Proc. Symposium on Microseisms*, U.S. Nat. Acad. Sci. Publ. 306, 74-93.

On the statistical distribution of the heights of sea waves, *J. Mar. Res.* 11, 245-266.

Oscillations in a three-layered stratified basin (Appendix to a paper by C.H. Mortimer), *Phil. Trans. R. Soc. Lond. B* 236, 399-402.

1953

Mass transport in water waves, *Phil. Trans. R. Soc. Lond. A* 245, 535-581.

On the decrease of velocity with depth in an irrotational water wave, *Proc. Cam. Phil. Soc.* 49, 552-560.

1954

The electric field induced by ocean currents and waves, with applications to the method of towed electrodes, *Pap. Phys. Oceanogr. Met.*, 13, 1-37 (with M.E. Stern and H. Stommel).

Uniform polyhedra, *Phil. Trans. R. Soc. Lond. A* 246, 401-450 (with H.S.M. Coxeter and J.C.P. Miller).

On slinky; the dynamics of a loose, heavy spring, Proc. Cam. Phil. Soc. 50, 347-351.

1955

Bounds for the integral of a non-negative function in terms of its Fourier coefficients, Proc. Cam. Phil. Soc. 51, 590-603.

Principles of the method of towed electrodes. Ass. Int. Oc'eanogr. Phys., Proc.-Verb. 6, 219-220.

1956

The statistical distribution of the maxima of a random function, Proc. R. Soc. Lond. A 237, 212-232 (with D.E. Cartwright).

Statistical properties of a moving wave form, Proc. Cam. Phil. Soc. 52, 234-245.

The refraction of sea waves in shallow water, J. Fluid Mech. 1, 163-176.

1957

The mechanics of the boundary-layer near the bottom in a progressive wave (Appendix to a paper by R.C.H. Russell and J.D.C. Osorio), Proc. 6th Conf. on Coastal Eng. (Miami), pp. 184-193.

On the velocities of the maxima in a moving wave-form, Proc. Cam. Phil. Soc. 53, 230-233.

The statistical analysis of a random moving surface, Phil. Trans. R. Soc. Lond. A 249, 321-387.

Statistical properties of an isotropic random surface, Phil. Trans. R. Soc. Lond. A 250, 157-174.

A statistical distribution arising in the study of the ionosphere, Proc. Phys. Soc. B70, 559-565.

On the transformation of a continuous spectrum by refraction, Proc. Cam. Phil. Soc. 53, 226-229.

1958

On the intervals between successive zeros of a random function, Proc. R. Soc. Lond. A 246, 99-118.

The statistical distribution of the curvature of a random Gaussian surface, Proc. Cam. Phil. Soc. 54, 439-453.

Book review: 'Water waves: The Mathematical Theory with Applications', by J.J. Stoker, in J. Fluid Mech. 4, 435-440.

1959

The distribution of the sizes of images reflected in a random surface, Proc. Cam. Phil. Soc. 55, 91-100.

1960

Le probl'eme hydrodynamique de la g'en'eration de micros'eisms par une houle stationnaire. Cahiers Oc'eanographiques 12, 383-406.

Mass transport in the boundary layer at a free oscillating surface, J. Fluid Mech. 8, 293-306.

The focusing of radiation by a random surface when the source is at a finite distance, *Proc. Cam. Phil. Soc.* 56, 27-40.

Reflection and refraction at a random moving surface. I. Pattern and paths of specular points, *J. Opt. Soc. Amer.* 50, 838-844.

Reflection and refraction at a random moving surface. II. Number of specular points in a Gaussian surface, *J. Opt. Soc. Amer.* 50, 845-850.

Reflection and refraction at a random moving surface, III. Frequency of twinkling in a Gaussian surface, *J. Opt. Soc. Amer.* 50, 851-856.

The statistical geometry of random surfaces, pp. 105-144 in *Hydrodynamic Instability*, ed. C.C. Lin, Amer. Math. Soc., Providence.

Changes in the form of short gravity waves on long waves and tidal currents, *J. Fluid Mech.* 8, 565-583 (with R.W. Stewart).

1961

Discussion of a paper by J.N. Nanda, 'The origin of microseisms', *J. Geophys. Res.* 66, 994.

The changes in amplitude of short gravity waves on steady non-uniform currents, *J. Fluid Mech.* 10, 529-549 (with R.W. Stewart).

1962

The distribution of intervals between zeros of a stationary random function, *Phil. Trans. R. Soc. Lond. A* 254, 557-599.

The directional spectrum of ocean waves, and processes of wave generation, *Proc. R. Soc. Lond. A* 265, 286-315.

Radiation stress and mass transport in gravity waves with applications to 'surf beats', *J. Fluid Mech.* 13, 481-504 (with R.W. Stewart).

Sea waves and beach cusps, *Geogr. J.* 128, 194-201 (with D.W. Parkin).

Resonant interactions between two trains of gravity waves, *J. Fluid Mech.* 12, 321-332.

Phase velocity effects in tertiary wave interactions, *J. Fluid Mech.* 12, 333-336 (with O.M. Phillips).

1963

The effect of non-linearities on statistical distributions in the theory of sea waves, *J. Fluid Mech.* 17, 459-480.

Observations of the directional spectrum of sea waves using the motions of a floating buoy, pp.111-136 in *Ocean Wave Spectra*, Prentice Hall, New York (with D.E. Cartwright and N.D. Smith).

A note on wave set-up, *J. Mar. Res.* 21, 4-10 (with R.W. Stewart).

The generation of capillary waves by steep gravity waves, *J. Fluid Mech.* 16, 138-159.

Bounding approximation to the distribution of intervals between zeros of stationary Gaussian function, pp 63-88 in the Times Series Analysis, ed. M. Rosenblatt, John Wiley and Sons, New York.

1964

Modified Gaussian distributions for slightly nonlinear variables, Radio Sci. 68D, 1049-1062.

Radiation stresses in water waves; a physical discussion, with applications, Deep-Sea Res, 11, 529-562 (with R.W. Stewart).

On group velocity and energy flux in planetary wave motions, Deep-Sea Res. 11, 35-42.

Planetary waves on a rotating sphere, Proc. R. Soc. Lond. A 279, 446-473.

1965

Planetary waves on a rotating sphere. II, Proc. R. Soc. Lond. A 284, 40-68.

The response of a stratified ocean to stationary or moving wind systems, Deep-Sea Res. 12, 923-973.

Some dynamical aspects of ocean currents, (Symons Memorial Lecture), Quart. J. R. Met. Soc. 91, 425-451.

1966

An experiment on third-order resonant wave interactions, J. Fluid Mech. 25, 417-435 (with N.D. Smith).

Planetary waves on a hemisphere bounded by meridians of longitude, Phil. Trans. R. Soc. Lond. A 260, 317-350.

Report on the I.U.T.A.M. Symposium on Rotating Fluid Systems, J. Fluid Mech. 26, 393-410 (with F.P. Bretherton and G.F. Carrier).

Fluctuating ocean currents, Review Lecture, Proc. 2nd Int. Oceanogr. Cong., Moscow, pp. 55-66.

1967

On the wave-induced difference in mean sea level between the two sides of a submerged breakwater, J. Mar. Res. 25, 148-153.

On the trapping of wave energy round islands, J. Fluid Mech. 29, 781-821.

Resonant interactions between planetary waves, Proc. R. Soc. Lond. A 299, 120-140 (with A.E. Gill).

1968

The eigenfunctions of Laplace's tidal equations over a sphere, Phil. Trans. R. Soc. Lond. A, 262, 511-607.

On the trapping of waves along a discontinuity of depth in a rotating ocean, J. Fluid Mech. 31, 417-434.

Double Kelvin waves with continuous depth profiles, J. Fluid Mech. 34, 49-80.

1969

On the reflexion of wave characteristics from rough surfaces, *J. Fluid Mech.* 37, 231-250.

A non-linear mechanism for the generation of sea waves, *Proc. R. Soc. Lond. A* 311, 371-389.

Action of a variable stress at the surface of water waves, *Phys. Fluids* 12, 737-740.

On the trapping of long-period waves round islands, *J. Fluid Mech.* 37, 773-784.

On the transport of mass by time-varying ocean currents, *Deep-Sea Res.* 16, 431-447.

On the interpretation of records of time-varying currents, *Proc. Symp. on Physical Variability in the North Atlantic*, Dublin, eds. A.J. Lee and H. Charnock, Conseil International Pour L'Exploration de la Mer, Rapports et Procès-Verbaux des Réunions, Bianco Luno, Denmark, 162, 35-41.

On wave breaking and the equilibrium spectrum of wind-generated waves, *Proc. R. Soc. Lond. A* 310, 151-159

The exact hydrodynamical description of a slosh, *Proc. NATO Advanced Study Institute on Topics in Geophysics*, Bangor, p. 44.

1970

Steady currents induced by oscillations round islands, *J. Fluid Mech.* 42, 701-720.

Longshore currents generated by obliquely incident sea waves, 1, *J. Geophys. Res.* 75, 6778-6789.

Longshore currents generated by obliquely incident sea waves, 2, *J. Geophys. Res.* 75, 6790-6801.

The free oscillations of fluid on a hemisphere bounded by meridians of longitude, *Phil. Trans. R. Soc. Lond. A* 266, 193-223 (with G.S. Pond).

1971

A synthetic proof of de Longchamps' chain, *Proc. Cam. Phil. Soc.* 69, 393-400.

A numerical disproof of a conjecture in projective geometry, *Proc. R. Soc. Lond. A* 323, 443-454.

Recent progress in the study of longshore currents, pp. 203-248 in *Waves on Beaches, and Resulting Sediment Transport*, ed. R.E. Meyer, Academic Press.

On the spectrum of sea level at Oahu, *J. Geophys. Res.* 76, 3517-3522.

On the Shannon-Weaver index of diversity in relation to the distribution of species in bird censuses, *Theor. Population Biol.* 2, 271-289.

1972

Clifford's chain and its analogues in relation to the higher polytopes, *Proc. R. Soc. Lond. A* 330, 443-466.

Topographic Rossby waves, Proc. Soc. R. Sci. Liège, 2, 11-16.

Some model experiments on continental shelf waves, J. Mar. Res. 30, 39-55 (with D.R. Caldwell and D.L. Cutchin).

The experimental generation of double Kelvin waves, Proc. R. Soc. Lond. A 326, 39-52 (with D.R. Caldwell).

A class of exact, time-dependent, free-surface flows, J. Fluid Mech. 55, 529-543.

Periodicity in whitecaps, Nature, Lond. 239, 449-451 (with M. Donelan and J.S. Turner).

1973

On a conjectured analogue to Clifford's chain in [4], Proc. Cam. Phil. Soc. 73, 37-43.

Reflections on a triangle, Math. Gaz. 57, 293-296.

On the spectrum of sea level at Oahu, J. Geophys. Res. 76, 3517-3522.

On the Shannon-Weaver index of diversity in relation to the distribution of species in bird censuses, Theor. Population Biol. 2, 271-289.

On the form of the highest progressive and standing waves in deep water, Proc. R. Soc. Lond. A 331, 445-456.

A model of flow separation at a free surface, J. Fluid Mech. 57, 129-148.

Review of: 'Breaking Waves', (film) by G.B. Olsen and S.P. Kjeldsen, J. Fluid Mech. 57, 624.

The mechanics of the surf zone, Proc 13th Int. Cong. on Theoretical and Applied Mechanics, Moscow, Springer-Verlag, pp. 213-228

1974

Reflections on reflections, Math. Gaz. 58, 257-263.

On the mass, momentum, energy and circulation of a solitary wave, Proc. R. Soc. Lond. A 337, 1-13.

On the mass, momentum, energy and circulation of a solitary wave II. Proc. R. Soc. Lond. A 340, 471-493 (with J.D. Fenton).

An 'entraining plume' model of a spilling breaker, J. Fluid Mech. 63, 1-20 (with J.S. Turner).

Breaking waves - in deep and shallow water, Proc. 10th Symp. on Naval Hydrodynamics, (Cambridge, Mass.), pp. 597-605.

1975

On the joint distribution of the periods and amplitudes of sea waves, J. Geophys. Res. 80, 2688-2694.

(Reflections)³, Math. Gaz. 59, 181-183 (with C.F. Parry).

Integral properties of periodic gravity waves of finite amplitude, Proc. R. Soc. Lond. A 342, 157-174.

1976

Inversive properties of the plane n -line and a symmetric figure of 2×5 points on a quadric, J. Lond. Math. Soc. 12, 206-212.

The average wave forces acting on wave power machines, J. Soc. Underwater Tech. 2, 4-8.

On the speed and profile of steep solitary waves, Proc. R. Soc. Lond. A 350, 175-189 (with J.G.B. Byatt-Smith).

Recent developments in the study of breaking waves, Proc. 15th Conf. on Coastal Eng. (Honolulu) pp. 441-460.

Self-similar, time-dependent flows with a free surface, J. Fluid Mech. 73, 603-620.

The deformation of steep surface waves on water. I. A numerical method of computation, Proc. R. Soc. A 350, 1-26 (with E.D. Cokelet).

A calculation of unsteady surface waves, Proc. 14th IUTAM Cong. (Delft, Holland), pp. 423-424 (with E.D. Cokelet).

Advances in the calculation of steep surface waves and plunging breakers, Proc. 2nd Int. Conf. on Numerical Ship Hydrodynamics, Berkeley, pp. 332-346.

The calculation of steep gravity waves. Proc. 2nd Conf. on Behaviour of Offshore Structures, Trondheim, Norway, 2, pp. 27-39 (with E.D. Cokelet and M.J. Fox).

On the nonlinear transfer of energy in the peak of a gravity-wave spectrum: A simplified model, Proc. R. Soc. Lond. A 347, 3111-328.

1977

Some effects of finite steepness on the generation of waves by wind, pp. 393-403, in A Voyage of Discovery (George Deacon 70th Anniversary Vol.), Pergamon Press, Oxford.

The mean forces exerted by waves on floating or submerged bodies, with applications to sand bars and wave power machines, Proc. R. Soc. Lond. A 352, 463-480.

On the nonlinear transformation of wave trains in shallow water, Archiw. Hydrotech. 24, 445-457.

Theory of the almost-highest wave: the inner solution, J. Fluid Mech. 80, 721-741 (with M.J.H. Fox).

On breaking waves, pp. 129-130, in Lecture Notes in Physics 64, eds. D.G. Provis and R. Radok, Berlin, Springer-Verlag.

1978

Theory of the almost-highest wave. Part 2. Matching and analytic extension, J. Fluid Mech. 85, 769-786 (with M.J.H. Fox).

Some new relations between Stokes's coefficients in the theory of gravity waves, J. Inst. Math. Appl. 22, 261-283.

The instabilities of gravity waves of finite amplitude in deep water. I. Superharmonics, Proc. R. Soc. Lond. A 360, 471-488.

The instabilities of gravity waves of finite amplitude in deep water. II. Subharmonics, Proc. R. Soc. Lond. A 360, 489-505.

The deformation of steep surface waves on water. II. Growth of normal-mode instabilities, Proc. R. Soc. Lond. A 364, 1-28 (with E.D. Cokelet).

On the dynamics of steep gravity waves in deep water, pp. 199-220 in Turbulent Fluxes Through the Sea Surface, Wave Dynamics, and Prediction, eds. A. Favre and K. Hasselman, Plenum Publ.

The orbital motion in steep water waves. Appendix to paper by J. Nath. Proc 16th Coastal Engineering Conf., Hamberg, Germany. Amer. Soc. Civil Eng., pp 874-877.

1979

Inversive properties of the plane n-line, II: an infinite six-fold chain of circle theorems, J. Lond Math. Soc. (2), 19, 541-560 (with C.F. Parry).

The almost-highest wave: a simple approximation, J. Fluid Mech. 94, 269-273.

The orbital motion in steep water waves (Appendix to a paper by J.H. Nath), Proc. 16th Int. Conf. on Coastal Eng. Hamburg, pp. 874-877.

Why is a water wave like a grandfather clock?, Phys. Fluids 22, 1828-1829.

The trajectories of particles in steep, symmetric gravity waves, J. Fluid Mech. 94, 497-517.

Book review: 'Fractals: Form, Change and Dimension,' by Benoit B. Mandelbrot, in J. Fluid Mech. 92, 206-208.

1980

On the distribution of the heights of sea waves: some effects on non-linearity and finite band width, J. Geophys. Res. 85, 1519-1523.

Contribution to the Discussion on Coastal Processes, Proc. 17th Int. Conf. on Coastal Engineering, Sydney, Australia, 3107-3108.

Spin and angular momentum in gravity waves, J. Fluid Mech. 97, 1-25.

A technique for time-dependent free-surface flows, Proc. R. Soc. Lond. A 371, 441-451.

On the forming of sharp corners at a free surface, Proc. R. Soc. Lond. A 371, 453-478.

Modulation of the amplitude of steep wind waves, J. Fluid Mech. 99, 705-713.

The unsolved problem of breaking waves, (Keynote address), Proc. 17th Int. Conf. on Coastal Engineering (Sydney, Australia) pp. 1-28.

Polygon transformations in fluid mechanics, Proc. 7th Int. Conf. on Numerical Methods in Fluid Mechanics, Stanford, California.

1981

Oscillating flow over steep sand ripples, *J. Fluid Mech.* 107, 1-35.

Trajectories of particles at the surface of steep solitary waves, *J. Fluid Mech.* 110, 239-247.

On the overturning of gravity waves, *Proc. R. Soc. Lond. A* 376, 377-400.

A parametric flow for breaking waves, *Proc. Int. Symp. on Hydrodynamics in Ocean Engineering (Trondheim)*, pp. 121-135.

1982

On the skewness of sea-surface slopes, *J. Phys. Oceanog.* 12, 1283-1291.

On triangular tomography, *Dynam. Atmos. Oceans* 7, 33-46.1983

Parametric solutions for breaking waves, *J Fluid Mech.* 121, 403-424.

1983

Peristaltic pumping in water waves, *J. Fluid Mech.* 137, 393-407.

On the joint distribution of wave periods and amplitudes in a random wave field, *Proc. R. Soc.Lond. A* 389, 241-258.

Can optical measurements help in the interpretation of radar backscatter?, pp. 121-127 in *Satellite Microwave Remote Sensing*, ed. T.D. Allan, Ellis Horwood, Chichester.

Wave set-up, percolation and undertow in the surf zone, *Proc. R. Soc. Lond. A*, 390, 283-291.

On integrals and invariants for inviscid, irrotational flow under gravity, *J. Fluid Mech.* 134, 155- 159.

Bubbles, breaking waves and hyperbolic jets at a free surface, *J. Fluid Mech.* 127, 103-121.

Rotating hyperbolic flow: particle trajectories and parametric representation, *J. Mech. Appl. Math.* 36, 247-270.

Measurements of breaking waves by a surface jump meter, *J. Geophys. Res.* 88, 9823-9831 (with N.D. Smith).

Towards the analytic description of overturning waves, pp. 1-24 in *Nonlinear Waves*, ed. L. Debnath, Cambridge Univ. Press.

1984

Statistical properties of wave groups in a random sea state, *Phil. Trans. R. Soc. Lond. A* 312,219-250.

New integral relations for gravity waves of finite amplitude, *J. Fluid Mech.* 149, 205-215.

On the stability of steep gravity waves, *Proc. R. Soc. Lond. A* 396, 269-280.

1985

Bifurcation in gravity waves, *J. Fluid Mech.* 151, 457-475.

A new way to calculate steep gravity waves, pp. 1-15 in *The Ocean Surface*, eds. Y. Toba and H. Mitsuyasu, D. Reidel Publishing Co., Dordrecht.

The asymptotic behaviour of the coefficients in Stokes's series for surface gravity waves, *I.M.A. J. Appl. Math.* 34, 269-277.

Accelerations in steep gravity waves, *J. Phys. Oceanogr.* 15, 1570-1579.

1986

On the skewness of sea surface elevation, *J. Fluid Mech.* 164, 487-497 (with M.A. Srokosz).

Accelerations in steep gravity waves: II. Subsurface accelerations, *J. Phys. Oceanogr.* 16, 1332-1337.

Eulerian and Lagrangian aspects of surface waves, *J. Fluid Mech.* 173 (G.I. Taylor Symposium vol.) 683-706.

Eulerian and Lagrangian wave measurements, *Proc. Ocean Struc. Dyn. Symp. (Corvallis, Oregon)* 1-32.

Surface wave interactions, Keynote Address, pp. 29-34 in *Proc. 9th Australasian Fluid Mech. Conf. (Auckland, New Zealand)*, 29-34.

Bifurcation and instability in gravity waves, *Proc. R. Soc. Lond. A* 403, 167-187.

Wave group statistics pp. 15-35 in *Oceanic Whitecaps*, eds. E.C. Monahan and G. MacNiocaill, (D. Reidel Publ. Co., Dordrecht).

Advances in breaking-wave dynamics pp. 209-2030 in *Wave Dynamics and Radio Probing of the Ocean Surface* eds. O.M. Phillips and K. Hasselmann, Plenum Publ., New York.

Measurements of breaking waves, in *Wave Dynamics and Radio Probing of the Ocean Surface* eds. O.M. Phillips and K. Hasselmann, Plenum Publ., New York. 257-264 (with N.D. Smith)

1987

The propagation of short surface waves on longer gravity waves, *J. Fluid Mech.* 177, 293-306.

Lagrangian moments and mass transport in Stokes waves, Part 1 *J. Fluid Mech.* 179, 547-555.

Measurements of the vertical acceleration in wind waves, *J. Phys. Oceanogr.* 17, 3-11 (with J.A. Ewing and M.A. Srokosz).

A stochastic model for sea surface roughness I. Wave crests, *Proc. R. Soc. Lond. A* 410, 19-34.

1988

Lagrangian moments and mass transport in Stokes waves. Part 2. Water of finite depth, *J. Fluid Mech.* 186, 321-336.

Mechanisms of wave breaking in deep water, pp. 1-30 in *Sea Surface Sound*, ed. B. R. Kerman, D. Reidel Publ. Co., Dordrecht.

Limiting forms for capillary-gravity waves, *J. Fluid Mech.* 194, 351-375.

The orbiting double pendulum: An analogue to interacting gravity waves, *Proc. R. Soc. Lond. A* 418, 281-299 (with F.S. Henyey and R.L. Schult).

1989

The dynamics of Bragg-Scattering waves on the sea surface, pp. 57-83 in *Mathematics in Remote Sensing*, ed. S.R. Brooks, Oxford, Clarendon Press.

Capillary-gravity waves of solitary type on deep water, *J. Fluid Mech.* 200, 451-470.

Monopole emission of sound by asymmetric bubble oscillations. Part I. Normal modes, *J. Fluid Mech.* 201, 525-541.

Monopole emission of sound by asymmetric bubble oscillations. Part II. An initial-value problem, *J. Fluid Mech.* 201, 543-565.

Some integral theorems relating to the oscillations of bubbles, *J. Fluid Mech.* 204, 159-166.

1990

An effect of side-walls on waves in a wind-wave channel, *J. Geophys. Res.* 95, 1765.

Flow separation near the crests of short gravity waves, *J. Phys. Oceanogr.* 20, 595-599.

An analytic model of sound production by raindrops, *J. Fluid Mech.* 214, 395-410.

The sound field due to an oscillating bubble near an indented free surface, *J. Fluid Mech.* 221, 675-683.

Bubble noise spectra, *J. Acoust. Soc. Amer.*, 87, 652-661.

Ray paths and caustics on a slightly oblate ellipsoid, *Proc. R. Soc. Lond. A* 428, 283-290.

1991

Laboratory measurements of modulation of short-wave slopes by long surface waves, *J. Fluid Mech.* 233, 389-404 (with S.J. Miller and O.H. Shemdin).

A stochastic model of sea-surface roughness. II, *Proc. R. Soc. Lond. A* 435, 405-422.

Resonance in nonlinear bubble oscillations, *J. Fluid Mech.* 224, 531-549.

The release of air bubbles from an underwater nozzle, *J. Fluid Mech.* 230, 365-390 (with B.R. Kerman and K. Lunde).

Bubble noise, *IMA J. of Applied Math.* 46, 67-70.

1992

Theory of weakly damped Stokes waves: a new formulation and its physical interpretation, *J. Fluid Mech.* 235, 319-324.

Capillary rollers and bores, *J. Fluid Mech.* 240, 659-679.

Nonlinear damping of bubble oscillations by resonant interaction, *J. Acoust. Soc. Amer.* 91, 1414-1422.

The crushing of air cavities in a liquid, *Proc. R. Soc. Lond. A* 439, 611-626.

1993

Highly-accelerated, free-surface flows, *J. Fluid Mech.* 248, 449-475.

Capillary-gravity waves of solitary type and envelope solitons on deep water, *J. Fluid Mech.* 252, 703-711.

Bubble noise mechanisms – a review, pp. 419-452, in *Natural Physical Sources of Underwater Sound*, ed. B.R. Kerman, Dordrecht, Kluwer Acad. Publ.

1994

Crest instabilities of gravity waves. Part 1. The almost-highest wave, *J. Fluid Mech.* 258, 115-129 (with R.P. Cleaver).

Crest instabilities of gravity waves. Part 2. Matching and asymptotic analysis, *J. Fluid Mech.* 259, 333-344 (with R.P. Cleaver and M.J.H. Fox).

A fractal approach to breaking waves, *J. Phys. Oceanogr.* 24, 1834-1838.

The initiation of spilling breakers, Keynote address, *Proc. Int. Symp. on Waves – Physical and Numerical Modelling*, University of British Columbia, Vancouver, B.C., 21-24 August, pp. 24-48.

Inertial shocks in surface waves and collapsing bubbles, pp. 383-396 in *Bubble Dynamics and Interface Phenomena*, eds. J.R. Blake et al., Dordrecht, Kluwer Acad. Publ.

Shear instability in spilling breakers, *Proc. R. Soc. Lond. A* 446, 399-409.

1995

On the disintegration of the jet in a plunging breaker, *J. Phys. Oceanogr.* 25, 2452-2462.

Parasitic capillary waves: a direct calculation, *J. Fluid Mech.* 301, 79-107.

Critical microjets in collapsing cavities, *J. Fluid Mech.* 290, 183-201 (with H.N. Oguz).

New insights into breaking waves and bubble entrainment, pp. 159-173 in *Sea Surface Sound '94*, eds. M.J. Buckingham and J.R. Potter. London, World Scientific, 494 pp.

1996

Capillary jumps on deep water, *J. Phys. Oceanogr.* 26, 1957-1965.

Asymptotic theory for the almost-highest solitary wave, *J. Fluid Mech.* 317, 1-19 (with M.J.H. Fox).

The crest instability of steep gravity waves or How do short waves break?, pp. 237-246, in *The Air Sea Interface*, eds. M.A. Donelan, W.H. Hui and W.J. Plant, Toronto, Canada, Univ. of Toronto Press, 789 pp.

Surface manifestations of turbulent flow, *J. Fluid Mech.* 308, 15-29.

1997

Crest instabilities of gravity waves. Part 3. Nonlinear development and breaking, *J. Fluid Mech.* 336, 33-50 (with D.G. Dommermuth).

On the crest instabilities of steep surface waves, *J. Fluid Mech.* 336, 51-68 (with M. Tanaka).

Progress toward understanding how waves break, *Proc. 21st Symp. on Naval Hydrodynamics*, Trondheim, Norway, 24-28 June 1996, Washington, D.C., Nat. Acad. Sci. Press, pp. 7-28.

Experiments on capillary-gravity waves of solitary type on deep water, *Phys. Fluids* 9, 1963-1968 (with X. Zhang).

Viscous dissipation in steep capillary-gravity waves, *J. Fluid Mech.* 344, 271-289.

Critical jets in surface waves and collapsing cavities, *Phil. Trans. Roy. Soc. Lond. A* 453, 1-15 (with H.N. Oguz).

Particle drift near an oscillating bubble, *Proc. R. Soc. Lond. A* 453, 1551-1568.

1998

Instabilities of a horizontal shear flow with a free surface, *J. Fluid Mech.* 364, 147-162.

Viscous streaming from an oscillating spherical bubble, *Proc. R. Soc. Lond. A* 454, 725-742.

Vorticity and curvature at a free surface, *J. Fluid Mech.* 356, 149-153.

1999

Solitary waves on deep water, pp. 149-167 in *Wind-over-Wave Couplings. Perspectives and Prospects*, eds. S.G. Sajjadi, N.H. Thomas and J.C.R. Hunt, Oxford, Clarendon Press, 356 pp.

Particle drift near an oscillating cavity. Sonochemistry and Sonoluminescence, eds L.A. Crum et al (1) Kluwer Acad. Press pp.105-116.

Viscous streaming near an oscillating and pulsating spherical cavity. *ibid* pp. 117-126

2000

A fourfold point of concurrence lying on the Euler line of a triangle, *Math. Intell.* 22, 54-59.

Experimental study of the liquid flow near a single sonoluminescent bubble, *J. Acoust. Soc. Am.* 108, 117-125 (with T. Verraes, F. Lepoint-Mullie and T. Lepoint).

Theory of water waves derived from a Lagrangian. Part 1. Standing waves, *J. Fluid Mech.* 423, 275-291.

Shooting for Pi: The bowstring lemma, Math. Gaz. 84, 216-222.

2001

On the principal centers of a triangle, Elemente der Mathematik 56, 122-129.

On the use of symmetry for constructing polyhedron models, pp. 11-18 in Symmetry 2000, eds. I.

Vertical jets from standing waves, Proc. R. Soc. Lond. A 457, 495-510.

On the breaking of standing waves by falling jets, Phys. Fluids 13, 1652-1659 (with D.G. Dommermuth).

Vertical jets from standing waves: The bazooka effect, pp. 195-204 in IUTAM Symp. on Free Surface Flows, ed. Y.D. Shikhmurzaev, Kluwer Acad. Publ.

Vertical jets from standing waves. II, Proc. R. Soc. Lond. A 457, 2137-2149 (with D.G. Dommermuth).

Asymptotic forms for jets from standing waves, J. Fluid Mech. 447, 287-297.

Geometrical constraints on the development of a diatom, J. Theor. Biol. 210, 101-105.

2002

Book review: "Geometry Civilised: History, Culture and Technique," by J.L. Heilbron, in Math. Intelligencer 24 71-73.

On steep gravity waves meeting a vertical wall: a triple instability. J. Fluid Mech. 466 305-318 (with D.A. Drazen).

Award of ASA Honorary Fellowship 8-minute reply.

2003

Nested triacontahedral shells, or How to grow a quasi-crystal. Math. Intelligencer 25 25-43.

On the ratio of the inradius to the circumradius of a triangle. Math. Gazette, 87 1-2.

Standing waves in the ocean. pp. 201-218 in Wind over Waves II: Forecasting and Fundamentals of Applications, eds. S.G. Sajjadi and J.C.R. Hunt, Horwood Publ., Chichester, U.K., 232 pp.

Tidings. Del Mar Sandpiper, July, p. 4. Del Mar, California, U.S.A.

Hypocycloids and global sound propagation, Echoes: Newsletter of the Acoustical Society of America, 13, 4, pp. 8-9. Melville, N.Y., Acoust. Soc. Amer.

2004

Thomas Brooke Benjamin, Oxford Dictionary of National Biography, Oxford, Univ. Press 2004-7ed.

Symmetry in mathematical toys, pp. 142-145 in Symmetry: Art and Science, (J. Int. Soc. for the Interdisciplinary Study of Symmetry), 2004/1-4. Budapest, Hungary.

Encounters with polytopes. *Symmetry: Culture and Science* 13, 17-31.

Methods for detecting microseism-generating ocean waves. (Abstract). EOS, Amer. Geophys. Un. Fall Meeting, San Francisco, 13-17 Dec. 2004, Special Session S06.

2005

On wave set-up in shoaling water with a rough sea bed. *J. Fluid Mech.* 527, 217-234.

On the times of high and low tides. *Geophys. Res. Lett.* 32, L24607, doi: 10.1029/2005GL023828.

2006

A close one-term approximation to the highest Stokes wave on deep water. *Ocean Engrg.*, 33 2012-2024 (with R.C.T. Rainey).

ROBOW: A wavemaker for use in water of infinite depth. *Proc. 21st Int. Workshop on Water.*

2007

Seven from the sea, pp 85-91 in *Homage to a Pied Puzzler*, eds. E. Pegg and A. Schoen, Wellesley, Mass., A.K. Peters. (Proc. Seventh Gathering for Gardner, Atlanta, Georgia, 16-19 Mar. 2006.) (inpress)

The Conway Space-Filling. *Symmetry: Art and Science, Journal of the ISISS*, eds. Lugosi, G., and Nagy, D., 310-313.

2008

The origin of deep-ocean microseisms in The North Atlantic Ocean, *Proc. R. Soc. Lond. A* 464, 777-793 (with S. Kedar, F. Webb, N. Graham, R. Clayton, and C. Jones).

2009

Snub polyhedra and organic growth. *Proc. R. Soc. Lond. A* 465, 477-491. (Online, 30 Oct. 2008). 8/4/2009.

2010

On Growth, Form and Yin-Yang. *Proc. Bridges 2010 Conf, Pecs, Hungary, 24-28*, eds. G.W. Hart and R. Sarhangi.

Group W at ARL. pp 58-66 in *Of Seas and Ships and Scientists*, eds. Anthony Laughton, John Gould, "Tom" Tucker and Howard Roe. Cambridge, U.K., Lutterworth Press 350pp. Also, *Wave Research at Wormley*, *ibid* pp 159-170.

Langton's Ant Revisited: The Symmetric Patterns. *Symmetry, Art and Science, Proc. ISISS General Assembly, Gmuend, Austria*, pp 158-169.

2016

Instability of Langmuir circulation by wind. *Adv. Appl. Fluid Mech.* 19, 725-763 (with S.G. Sajjadi)