

Bibliography

- [1] Anselmet, F., Gagne, Y., Hopfinger, E. J. and Antonia, R. A., 1984. High-order velocity structure functions in turbulent shear flows. *J. Fluid Mech.* **140**, 63.
- [2] Antonia, R. A., Chambers A. J., Satyaprakash, B. R., 1981. Reynolds number dependence of high order moments of the streamwise turbulent velocity derivative. *Boundary-Layer Meteorol.* **21**, 159.
- [3] Antonia R. A., Satyaprakash, B. R., Hussain, AKMF., 1982. Statistic of fine-scale velocity in turbulent plane and circular jets. *J. Fluid Mech.* **119**, 55.
- [4] Antonia, R. A., Anselmet, F. and Chambers, A. J., 1986. Assessment of local isotropy using measurements in a turbulent plane jet. *J. Fluid Mech.* **163**, 365.
- [5] Antonia, R. A. and Pearson B. R., 1997. Scaling exponents for turbulent velocity and temperature increments. *Europhy. Lett.* **40**, 123.
- [6] Arneodo, A., Baudet, C., Belin, F., Benzi, R., *et al.*, 1996. Structure functions in experimental 3-D turbulence, in various flow configuration, at Reynolds number between 30 and 5000. *Europhys. Lett.* **34**, 2343.
- [7] Babiano, A., Dubrulle, B. and Frick, P., 1995. Scaling properties of two dimensional turbulence. *Phys. Rev. E* **52**, 3719.
- [8] Babiano, A., Dubrulle, B. and Frick, F., 1997. Some properties of two-dimensional inverse energy cascade dynamics. *Phys. Rev. E.* **55**, 2693.
- [9] Babiano, A., 2000. Non-homogeneous/Nonlocal Two-dimensional Dynamics in Structure and dynamics of vortices. *Lecture Notes in Physics*, Ed. A. Maurel and P. Petitjeans, Springer Verlag.
- [10] Bachelor, G. K., 1953. *Homogeneous Turbulence*. Cambridge Univ. Press, London.
- [11] Baudet, C., Ciliberto, S. and Tien, P. N., 1993. Some comments on scaling exponents of turbulence, *J. Phys. II France* **3**, 293.

- [12] Benzi, R., Paladin, G., Parisi, G. and Vulpiani, A., 1984. On the multifractal nature of fully developed turbulence and chaotic systems. *J. Phys. A* **17**, 3521.
- [13] Benzi, R., Ciliberto, S., Tripiccone, R., Baudet, C., Massaioli, F. and Succi, S., 1993. Extended Self Similarity in turbulent flows, *Phys. Rev. E* **48**, R29.
- [14] Benzi, R., Massaioli, F., Succi, S. and Tripiccone, R., 1994. Scaling behaviour of the velocity and temperature correlation functions in 3D convective turbulence. *Europhys. Lett.* **28**, 231.
- [15] Benzi, R., Biferale, L., Ciliberto, S., Struglia, M. V. and Tripiccone, R., 1996. Generalized scaling in fully developed turbulence. *Physica D* **96**, 162.
- [16] Bortav, O. N. and Pelz, R. B., 1997. Structures and structure functions in the inertial range of turbulence. *Phys. Fluids* **9**, 1400.
- [17] Bracco, A., LaCasce J. H. and Provenzale A., 1999. Velocity pdf's for oceanic floats. *J. Phys. Oceanogr.*
- [18] Briscollini, M., Santangelo, Succi, S. and Benzi, R., 1994. Extended self-similarity in the numerical simulation of three-dimensional homogeneous flows. *Phys. Rev. E* **50**, 1745.
- [19] Camussi, R. and Gui, G., 1995. Experimental analysis of scaling laws in low and moderate Re grid generated turbulence. *Advances in Turbulence V*, 63.
- [20] Camussi, R., Barbagallo, D., Guj, G. and Stella, F., 1996. Transverse and longitudinal scaling laws in non-homogeneous low Re turbulence. *Phys. Fluids* **8**, 1181.
- [21] Carbone, V., 1994. Scaling exponents of the velocity structure functions in the interplanetary medium. *Ann. Geophys.*, **12**, 585.
- [22] Carbone, V. and Bruno, R., 1996. Cancellation exponents and multifractal scaling laws in the solar wind magnetohydrodynamic turbulence. *Ann Geophys.*, **14**, 777.
- [23] Castaing, B., Cagne, Y. and Hopfinger, E. J., 1990. Velocity probability density functions of high Reynolds number turbulence. *Physica D* **46**, 177.
- [24] Chambers, A. J., Antonia, R. A., 1984. Atmospheric estimates of power-law exponents μ and μ_θ . *Boundary-Layer Meteorol.* **28**, 343.
- [25] Champagne, F. H. and Sleicher, C. A., 1967. Turbulence measurements with inclined Hot-Wires. Part II: Hot-Wire response equations. *J. Fluid Mech.* **28**, 177.

- [26] Champagne, F. H., Harris, V. G. and Corrsin, S., 1970. Experiments on nearly homogeneous turbulent shear flow. *J. Fluid Mech.* **41**, 81.
- [27] Champagne, F. H., 1978. The fine scale structure of the turbulent velocity field. *J. Fluid Mech.* **86**, 67.
- [28] Chhabra, A. B. and Sreenivasan, K. R., 1992. Scale-invariant multiplier distributions in turbulence. *Phys. Rev. Lett.* **68**, 2762.
- [29] Chilla, F., Pinton J. F. and Labbe, R., 1996. On the influence of a large-scale coherent vortex on the turbulent cascade. *Europhys. Lett.* **35**, 271.
- [30] Comte-Bellot, G. and Corrsin, S., 1971. Simple Eulerian time correlation of full and narrow band velocity signals in grid generated isotropic turbulence. *J. Fluid Mech.*, **48**, 273.
- [31] Dubrulle, B. 1994. Intermittency in fully developed turbulence: log-Poisson statistics and generalized scale-covariance. *Phys. Rev. Lett.* **73**, 959.
- [32] Frisch, U., 1995. *Turbulence, the legacy of A. N. Kolmogorov.* Cambridge University Press.
- [33] Frisch, U., Sulem, P. L. and Nelkin, M., 1978. A simple dynamical model of intermittent fully developed turbulence. *J. Fluid Mech.* **87**, 719.
- [34] Frisch, U. and Vergassola, M., 1991. A prediction of the multifractal model: the intermediate dissipation range. *Europhys. Lett.* **14**, 439.
- [35] Gagne, Y., 1987. *Etude experimentale de l'intermittence et des singularites dans le plan complexe en turbulence developpee.* These de Docteur es-Sciences Physiques, Universite de Grenoble.
- [36] Gagne, Y. and Villermaux E., 1994. *A tentative dictionary* plenum Press, New York.
- [37] Gaudin, E., Goujon-Durand, S., Brotas, B., Wojciechowski, J. and Wesfreid J. E., 1998. Spatial properties of velocity structure functions in turbulent wake flows. *Phys. Rev. E* **57**, R9.
- [38] Granata, T. C., Garcia, E., Petersen, J. K., Mehlenbreg, F., Schlyter, L. and Stips, A., 1999. Submitted to *marine Ecology Progress Series*.
- [39] Grant, H. L. and Nisbet, I. C., 1957. *J. Fluid Mech.* **2**, 263.
- [40] Grant, H. L., Stewart, R. W. and Moilliet, A., 1962. Turbulent spectra from a tidal channel. *J. Fluid Mech.* **12**, 241.

- [41] Herweijer, J. A., 1995. The small-scale structure of turbulence. PhD thesis, Univ. Eindhoven, The Netherlands.
- [42] Hinze, J. D., 1959, Turbulence. McGraw-Hill Book Co., New York.
- [43] Kailasnath, P., Sreenivasan, K. R. and Stolovitzky, G., 1992. Probability density of velocity increments in turbulent flows. *Phys. Rev. E.* **50**, 4352.
- [44] Kennelly, A. E., Wright, C. A. and Bylevelt, J. S., 1909. The convection of heat from copper wires. *Trans. A. I. E. E.*, vol. **28**, 363.
- [45] Kolmogorov, A. N., 1941. Dissipation of energy in the locally isotropic turbulence. *Dokl. Akad. Nauk SSSR* **32**, 1.
- [46] Kolmogorov, A. N., 1962. A refinement of previous hypotheses concerning the local structure of turbulence in a viscous incompressible fluid at high Reynolds number. *J. Fluid Mech.* **13**, 82.
- [47] Landau, L. D. and Lifshitz, E. M., 1987. *Fluid Mechanics*. 2nd ed. Pergamon Press, Oxford.
- [48] Lesieur, M., 1997, *Turbulence in Fluids*. Third revised and enlarged edition, Kluwer Academic Publishers, The Netherlands.
- [49] Lin, C. C., 1959, "Statistical Theories of Turbulence", *Turbulent Flow and Heat Transfer*. Princeton Univ. Press.
- [50] Lumley, J. L. and Panofsky, H. A., 1964, *The Structure of Atmospheric Turbulence*, Interscience Publishers, New York.
- [51] Lumley, J. L., 1965. On the interpretation of time-spectra measured in high intensity shear flows. *Phys. Fluids* **8**, 1056.
- [52] Mahjoub, O. B., Redondo, J. M. and Babiano, A., 1998. Structure functions in complex flows. *Appl. Scientific Res.* **59**, 299.
- [53] Mahjoub, O. B., Redondo, J. M. and Babiano, A., 2000a. Self similarity and intermittency in a turbulent non-homogeneous wake. *Adv. Turbulence* **VIII**, 783.
- [54] Mahjoub, O. B., Granata, T. C. and Redondo, J. M., 2000b. Scaling laws in geophysical flows. *Phys. and Chem. of the Earth* (accepted).
- [55] Marsch, E. and Liu, S., 1993. Structure functions and intermittency of velocity fluctuations in the inner solar wind. *Ann. Geophys.* **11**, 227.

- [56] Maurer, J., Tabeling, P. and Zocchi, G., 1994. Statistics of turbulence between two counter-rotating disks in low temperature helium gas. *Europhys. Lett.* **26**,31.
- [57] Meneveau, C. M. and Sreenivasan, K. R. 1987. The multifractal spectrum of the dissipation field in turbulent flows. *Nucl. Phys. B Proc. Suppl.* **2**, 49.
- [58] Meneveau, C. M. and Sreenivasan, K. R. 1991. The multifractal nature of turbulent energy dissipation. *J. Fluid Mech.* **224**, 429.
- [59] Mohamed, M. S. and Rue, J. C. la, 1990. The decay power law in grid-generated turbulence. *J. Fluid Mech.* **219**, 195.
- [60] Monin, A. S. and Yaglom, A. M., 1975. *Statistical Fluid Mechanics*. Vol. **2**, MIT Press, Cambridge.
- [61] Novikov, E. A., 1971. Intermittency and scale similarity in the structure of a turbulent flow. *Prikl. Math. Mech.* **35**, 266.
- [62] Novikov, E. A. and Stewart, R. W., 1964. Intermittency of turbulence and spectrum of fluctuations in energy-dissipation. *Izv. Akad. Nauk USSR, Ser. Geofiz.* **3**, 408.
- [63] Obukhov, A. M., 1962. Some specific features of atmospheric turbulence, *J. Fluid Mech.* **13**, 77.
- [64] Panchapakesan, N. R. and Lumley, J. L., 1993. Turbulence measurements in axisymmetric jets of air and helium. Part 1. Air jet. Part 2. helium. *J. Fluid Mech.* **246**, 197.
- [65] Pinton, J. F. and Labbé, R., 1994. Correction to the Taylor hypothesis in swirling flows. *J. Phys. II France* **4**, 1461.
- [66] Politano, H. and Pouquet, A., 1998. Dynamical length scales for turbulent magnetized flows. *Geophys. Res. Lett.*, **25**, 1.
- [67] Praskovskiy, A. A. and Oncley, S., 1994. Probability density distribution of velocity differences at very high Reynolds numbers. *Phys. Rev. Lett.* **73**, 3399.
- [68] Richardson, L. F., 1922. *Weather prediction by numerical process*. Cambridge University Press.
- [69] Rodriguez, A., Arcilla, A. S., Collado, F., Gracia, V., Cousirat, M. and Prieto, J., 1994. Waves and currents in the Ebro delta surf-zone: measurements and modeling. *Proc. Int. conf. Coast Eng., ASCE*, 2542.

- [70] Rodriguez, A., 1997. Estudio experimental de la hidrodinamica en la Zona de rompientes. PhD thesis, Universidad Polit cnica de Catalunya, Spain.
- [71] Rodriguez, A., Arcilla, A. S., Redondo, J. M. and Mosso, C., 1999. Macroturbulence measurements with Electromagnetic and Ultrasonic sensors: A comparison under high-turbulent flows. *Exp. Fluids* **27**, 31.
- [72] Rodriguez, A., Arcilla, A., Collado, F., Gracia, V., Cousirat, M. and Prieto, J., 1994. Waves and currents in the Ebro delta surf-zone: measurements and modeling. *Proc. Int. conf. Coast Eng., ASCE*, 2542.
- [73] She Z-S, Leveque E., 1994. Universal scaling laws in fully developed turbulence. *Phys. Rev. Lett.* **72**, 336.
- [74] Sreenivasan, K. R., 1991. On the universality of the Kolmogorov constant. *Phys. Fluids* **7**, 2778.
- [75] Sreenivasan, K. R. and Kailasnath, P., 1993. An update on the intermittency exponent in turbulence. *Phys. Fluids A* **5**, 512.
- [76] Sreenivasan, K. R. and Antonia, R. A., 1997. The phenomenology of small-scale turbulence. *Annu. Rev. Fluid Mech.* **29**, 435.
- [77] Stolovitzky, G. and Sreenivasan, K. R., 1993. Scaling of structure functions. *Phys. Rev. E* **48**, R33.
- [78] Taylor, G. Y., 1938. The spectrum of turbulence. *Proc. R. Soc. A* **164**, 476.
- [79] Tennekes, H. and Lumley, J. L., 1972. *A first course in turbulence*. MIT Press, Cambridge, London.
- [80] Thoroddsen, S. T. and Atta, C. W. van, 1992. Experimental evidence supporting Kolmogorov's refined similarity hypothesis, *Phys. Fluids A* **4**, 2592.
- [81] Townsend, A. A., 1948. Local isotropy in the turbulent wake of a cylinder. *Austr. J. Sci, Res.* **1**, 161.
- [82] Townsend, A. A., 1956. *The Structure of Turbulent Shear Flow*. Cambridge Univ. Press, London.
- [83] Uberoi, M. S. and Freymuth, P., 1969. Spectra of turbulence behind circular cylinders, *Phys. Fluids* **12**, 1359.
- [84] Van Dyke, M., 1982. *An Album of Fluid Motion*. The Parabolic Press, Stanford, CA.

- [85] Vincent, A. and Meneguzzi, M., 1991. The spatial structure and statistical properties of homogeneous turbulence. *J. Fluid Mech.* **225**, 1.
- [86] Weiss, J. B., Provenzale, A. and McWilliams, J. C. 1998. Lagrangian dynamics in high-dimensional point-vortex systems. *Phys. Fluids* **10**, 1929.
- [87] Wojciechowski, J., 1998. Warsaw University of Technology. Private communication.
- [88] Wygnanski, I. and Fiedler, H., 1969. Some measurements in the self-preserving jet. *J. Fluid Mech.* **38**, 577.
- [89] Yelland, M. and Taylor, P. K., 1996. Wind stress measurements from the open ocean. *J. Phys. Oceanogr.* **26**, 541.