

Contents

Bibliography	xix
--------------	-----

Statistical Science interview	xxxix
-------------------------------	-------

Part I Theoretical Statistics

1. Commentary by Victor M. Panaretos	3
2. Necessary and sufficient conditions for a statistical problem to be invariant under a Lie group. <i>Annals of Mathematical Statistics</i> , Vol. 34 (1963), pp. 492–500. Reprinted with permission of the Institute of Mathematical Statistics.	11
3. An asymptotic representation of the sample distribution function. <i>Bulletin of the American Mathematical Society</i> , Vol. 75 (1969), pp. 545–547. Reprinted with permission of the American Mathematical Society	21
4. The spectral analysis of stationary interval functions. <i>Proceedings of the Sixth Berkeley Symposium on Mathematical Statistics and Probability</i> , Eds. L.M. Le Cam, J. Neyman & E.L. Scott, Vol. 1 (1972), pp. 483–513. Reprinted with permission of the University of California Press.	25
5. On the number of solutions of systems of random equations. <i>Annals of Mathematical Statistics</i> , Vol. 43 (1972), pp. 534–540. Reprinted with permission of the Institute of Mathematical Statistics.	57
6. Asymptotic normality of finite fourier transforms of stationary generalized processes. <i>Journal of Multivariate Analysis</i> , Vol. 12 (1982), pp. 64–71. Reprinted with permission of Elsevier. An electronic version is available at doi:10.1016/0047-259X(82)90082-3	65
7. A particle migrating randomly on a sphere. <i>Journal of Theoretical Probability</i> , Vol. 10 (1997), pp. 429–443. Reprinted with permission of Springer Science+Business Media.	73

8. Some statistical methods for random process data from seismology and neurophysiology. *Annals of Statistics*, Vol. 16 (1988), pp. 1–54 (The 1983 Wald Memorial Lectures). Reprinted with permission of the Institute of Mathematical Statistics. 89

Part II Time Series Papers

9. Commentary by Pedro A. Morettin 145
10. An introduction to polyspectra. *Ann. Math. Statist.* Vol. 36, 1351–1374 (1965). Reprinted with permission of the Institute of Mathematical Statistics. 149
11. Asymptotic theory of estimates of k th-order spectra. *Proc. Natl. Acad. Sci. U.S.A.* Vol. 57, 206–210 (1967). 173
12. Asymptotic properties of spectral estimates of second order. *Biometrika* Vol. 56, 375–390 (1969). Reprinted with permission of the Oxford University Press. 179
13. Fourier analysis of stationary processes. *Proc. IEEE* Vol. 62, 1628–1643 (1974). Reprinted with permission of the Institute of Electrical and Electronics Engineers. 195
14. The digital rainbow: some history and applications of numerical spectrum analysis. *Canad. J. Statist.* Vol. 21, 1–19 (1993). Reprinted with permission of the Statistical Society of Canada. 211
15. An investigation of the second- and higher-order spectra of music. *Signal Processing* Vol. 65, 161–179 (1998). Reprinted with permission of Elsevier. An electronic version is available at doi:10.1016/S0165-1684(97)00217-X 231
16. Some examples of empirical Fourier analysis in scientific problems. In *Asymptotics, Nonparametrics, and Time Series: A Tribute to Madan Lal Puri*, Ghosh, Subir, editor, Statistics, Textbooks and Monographs Vol. 158, 1–36, Dekker, New York, NY (1999). Reprinted with permission of Taylor and Francis. 251
17. Some examples of random process environmental data analysis. In Rao, C.R. and Sen, P.K. editors, *Handbook of Statistics* Vol. 18, 33–56, Elsevier, Amsterdam (2000). Reprinted with permission of Elsevier. 287

Part III Population Biology and Environment

18. Commentary: Introductory Comments to Some Applied Papers by David R. Brillinger, by Tore Schweder and Haiganoush Preisler 325
19. Empirical modelling of population time series data: The case of age and density dependent vital rates. *Some Mathematical Questions in Biology*, 14th Symposium (San Francisco, 1980), Oster, George F. editor, Lectures on Mathematics in the Life Sciences Vol. 13, 65–90, American Mathematical Society, Providence, RI (1980). Reprinted with permission of the American Mathematical Society. 335

20. Learning a potential function from a trajectory. *Signal Processing Letters*, Vol 14, 867–870 (2007). Reprinted with permission of the Institute of Electrical and Electronics Engineers. 361
21. A potential function approach to the flow of play in soccer. *J. Quantitative Analysis in Sports*, Issue 1 article 3, 20 pp. (2007). Reprinted with permission of the Berkeley Electronic Press. 365
22. The use of potential functions in modelling animal movement. *Data Analysis from Statistical Foundations: A Festschrift in Honour of the 75th Birthday of D.A.S. Fraser*, Saleh, A.K.M.E. editor, 369–386, Nova Science Publishers, Huntington, NY (2001). Reprinted with permission of Nova Science. 385
23. Elephant seal movements: modelling migration. *Can. J. Stat.* Vol. 26 No. 3, 431–443 (1998). Reprinted with permission of the Canadian Statistical Society. 411
24. Random process methods and environmental data: the 1996 Hunter Lecture. *Environmetrics* Vol. 8 No. 4, 269281 (1997). Reprinted with permission of Wiley-Blackwell. 425
25. The 2005 Neyman lecture: dynamic indeterminism in science. *Statistical Science* Vol. 23, 48–64 (2008). Reprinted with permission of the Institute of Mathematical Statistics. 439

Part IV Point Processes

26. Commentary by Peter Guttorp 459
27. An empirical investigation of the Chandler wobble and two proposed excitation processes. *Bulletin of the International Statistical Institute*. 39th Session: Vienna 1973. Book 3, 413–434, International Statistical Institute (1973). Reprinted with permission of the International Statistical Institute and John Wiley & Sons. 465
28. Estimation of uncertainties in eigenspectral estimates from decaying geophysical time series. *Geophys. J. Roy. Astron. Soc.* Vol. 59, 593–603 (1979). Reprinted with permission of the Royal Astronomical Society. 487
29. Statistical inference for stationary point processes. *Stochastic Processes and Related Topics* (Bloomington, IN, 1974), Puri, M.L. editor Vol. 1, 55–99, Academic Press, New York, NY (1975). Reprinted with permission of Elsevier. 499
30. The identification of point process systems. *Ann. Probability* Vol. 3 No. 6, 909–929 (1975). Reprinted with permission of the Institute of Mathematical Statistics. 545

31. Measuring the association of point processes: a case history.
Amer. Math. Monthly Vol. 83, 16–22 (1976). Reprinted
with permission of the Mathematical Association of America. 561
32. Empirical examination of the threshold model of neuron firing.
Biological Cybernetics Vol. 35, 213–220 (1979). Reprinted
with permission of Springer Science+Business Media. 569
33. Nerve cell spike train data analysis: a progression of technique.
J. Amer. Statist. Assoc. Vol. 87, 260–271 (1992). 1991 R.A.
Fisher Memorial Lecture. Reprinted with permission of the
American Statistical Association. 577
34. A generalized linear model with “gaussian” regressor variables.
A Festschrift for Erich L. Lehmann, Bickel, Peter J. and Doksum,
Kjell and Hodges, Jr., J.L. editors, Wadsworth
Statistics/Probability Series, 97–114, Chapman & Hall/CRC (1982).
Reprinted with permission of Taylor and Francis. 589
35. The identification of a particular nonlinear time series system.
Biometrika Vol. 64, 509–515 (1977). Reprinted with permission
of the Oxford University Press. 609

Selected Works of David Brillinger

Guttorp, P.; Brillinger, D. (Eds.)

2012, LXXI, 613 p., Hardcover

ISBN: 978-1-4614-1343-1