Obituary of Professor Marek Fisz

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In the Metropolitan Hospital of New York City, U.S.A., on November 4, 1963 Professor MAREK FISZ passed away. He was in his 54-th year, and is survived by his wife Olga and their son Alexsander. Prior to this very sad and most untimely passing, during a relatively short professional career of less than 15 years, MAREK FISZ had contributed very significantly to Probability and Mathematical Statistics, as is indicated in part by the bibliography below.

MAREK FISZ was born on January 15, 1910 in Szydlowiec, a town in central Poland. He studied mathematics at the University of Warsaw from 1934 to 1939, and received in 1939 the Magister Degree for his work on conformal mappings under the supervision of Professor STANISŁAW SAKS. After a delay caused by the war and post war conditions, he continued his studies at the Universities of Warsaw and Wrocław in 1947. On June 23, 1951 the degree of Doctor of Science was conferred on him by the University of Wrocław for his work [3] on sampling methods in quality control, done under the supervision of Professor HUGO STEIN-HAUS. During the years 1947—1951, he also served as Scientific Advisor on random sampling methods to the Central Statistical Office in Warsaw.

In 1950, MAREK FISZ began work at the Mathematical Institute of the Polish Academy of Sciences, and following his doctorate in 1951 he worked concurrently at the University of Warsaw; as an Instructor from 1951—1954, as Docent from 1954—1957 and as Extraordinary Professor from March 1957 to September 1960. During the later years he was head of the Chair of Mathematical Statistics at the University of Warsaw and Chief of the Division of Mathematical Statistics in the Mathematical Institute of the Polish Academy of Sciences.

Before travelling to the United States in 1960, Professor FISZ had travelled to Russia to work for three months at the University of Moscow in 1955, and to China to lecture at the University of Peking in the Spring term of 1957.

During his travels to Russia, China and America he became personally acquainted with many persons in his own field, and in several instances collaborated on joint research.

While in the United States he held positions at the University of Washington (Seattle), Stanford University (Stanford), Columbia University and New York University (New York). It was while on the faculty of the latter institution that Professor FISZ passed away.

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Although Professor Fisz began his research at the relatively late age of 40, the prolificacy and modernity of his researches reflect an interest and an enthusiasm more usually associated with the young researcher. This interest and enthusiasm also manifested itself in the classroom. He was a dedicated lecturer, well liked and respected by his students.

As indicated in his list of publications, Professor Fisz' earlier researches, including his doctoral dissertation, were in the fields of Sampling Theory and Quality Control ([1], [2], [3], [4], [15], [16]). These researches were followed by a series of notes on limiting distributions of discrete random variables with particular emphasis on the Poisson and Multinomial distributions [5], [6], [8], [11], [14], [17]).

The modernity of Professor Fisz' research is indicated best by his several papers in 1957 ([20], [21], [22]) on the limiting distributions of Kolmogorov-Smirov type distribution-free statistics. In these papers he applied the 1956 results of Prokhorov on weak convergence of measures to multidimensional empirical processes; results which even now, a decade later, are just beginning to be put to full use in Statistics. These papers were prepared during his visits to Moscow and Peking.

The investigation of sample-function properties of stochastic processes was also of considerable interest to Professor Fisz. In 1956, [19], he gave conditions expressed in terms of absolute probabilities, under which almost all sample functions of a process are jump functions with a finite expected number of discontinuities. These results were considerably generalized in the paper [34] which he presented in 1960 to the Fourth Berkeley Symposium.

On June 16, 1961, in Seattle, Washington, U.S.A., Professor Fisz presented a Special Invited Paper [35] at the Annual Meeting of the Institute of Mathematical Statistics. The subject of his address was Infinitely Divisible Distributions, a subject in which he remained interested till his death. (Cf. [36], [38], [39], [40]). This excellent expository address [35], together with its extensive bibliography of 104 references will continue to be very useful for many years to come.

Perhaps the most far-reaching contribution by Professor Fisz is his text book, "Probability Theory and Mathematical Statistics", (6). This book was begun in 1950, even before he received his doctorate. Its first edition was published in Polish in 1954, (1), all copies of which were sold within a few months. In 1958 an enlarged second edition (3) was published in Polish together with a German translation (4). Then in 1963, the third edition (6) in English was published. From a first edition of 374 pages the book had now grown to 677 pages.

This text was written for either senior undergraduate or first-year graduate students. It covers both probability theory and statistical inference, and includes introductions to stochastic processes and sequential analysis in addition to the more usual topics. There is a large collection of 317 problems and complements in the book, which, together with its considerable historical and bibliographical information, make it an excellent reference book as well as a textbook.

In his relatively short academic career, Professor Fisz contributed greatly to the teaching and advancement of his subject in Europe, in Asia, and in America. His untimely passing is deeply felt by all.

Bibliography of Marek Fisz

Papers

1. Letter sampling in population investigations. Przeglad Statystyczny **3** (1949).
2. Project of a sample survey of the census material. Studia i Prace Statystyczne **1** (1950).
3. Quality control of mass production by variables. Studia i Prace Statystyczne **1** (1950).
4. The efficiency of two sampling methods. Pracei Studia Statystyczne **2** (1951).
5. The limiting distribution of the difference of two Poisson random variables. Zastosowania Mat. **1**, 41—45 (1953).
6. The limiting distributions of sums of arbitrary independent and equally distributed r-point ($r \geqq 2$) random variables. Bull. Acad. Polon. Sci. Cl. III, 235—238 (1953); Studia Math. **14**, 111—123 (1953).
7. Die Wahrscheinlichkeitsrechnung als Hilfsmittel zu Untersuchungen in Naturwissenschaften und Produktion. Die Hauptreferate des **8**, 69—94 (1953).
8. The limiting distributions of the multinomial distribution. Studia math. **14**, 272—275 (1954).
9. Generalization of a theorem of Khintchin. Studia math. **14**, 310—313 (1954).
10. Accuracy of an asymptotical formula. Zastosowania Mat. **2**, 62—66 (1954).
11. Die Grenzverteilungen der Multinomialverteilung. Ber. Tagung Wahrscheinlichkeitsrechnung mathematische Statistik in Berlin, Oktober, 51—53 (1954).
12. The limiting distribution of a function of two independent random variables and its statistical application. Colloquium math. **3**, 138—146 (1955).
13. Refinement of a probability limit theorem and its application to Bessel functions. Acta math. Acad. Sci. Hungar **6**, 199—202 (1955).
14. A limit theorem for a modified Bernoulli scheme. Studia math. **15**, 80—83 (1955).
15. On determining the safety factor (with T. CZECHOWSKI, W. SADOWSKI, and R. ZASĘPA). Zastosowania Mat. **2**, 190—198 (1955).
16. The construction of artificial populations and their application. Prace mat. **1**, 174—182 (1955).
17. The analytical characterization of the composed non-homogeneous Poisson process (with K. URBANIK). Bull. Acad. Polon. Sci. Cl. III **3**, 149—150 (1955); Studia math (with K. URBANIK) **15**, 328—336 (1956).
18. The realizations of some purely discontinuous stochastic processes. Bull. Acad. Polon. Sci. Cl. III **4**, 63—65 (1956).
19. Realizations of some stochastic processes. Studia math. **15**, 359—364 (1956).
20. Asymptotically independent linear functions of empirical distribution functions (with L. C. CHANG). Sci. Record (n. Ser.) **1**, 335—340 (1957).
21. Exact distributions of the maximal values of some functions of empirical distribution functions (with L. C. CHANG). Sci. Record (n. Ser.) **1**, 341—346 (1957).
22. A limit theorem for empirical distribution functions. Bull. Acad. Polon. Sci. Cl. III **5**, 695—698 (1957); Studia math. **17**, 71—77 (1958).
23. A central limit theorem for some stochastic processes. Bull. Acad. Polon. Sci. Sér. Sci. math. astron. phys. **6**, 437—443 (1958).
24. A limit theorem for non-decreasing random functions. Bull. Acad. Polon. Sci. Sér. Sci. math. astron. phys. **6**, 485—487 (1958).
25. A characterization of normal distributions in Hilbert space (with YU V. PROHOROV). Theor. Verojatn. Primen. **2**, 475—477 (1957).
26. A central limit theorem for stochastic processes with independent increments. Studia math. **18**, 223—227 (1959).
27. On necessary and sufficient conditions for the validity of the strong law of large numbers expressed in terms of moments. Bull. Acad. Polon. Sci. Sér. math. astron. phys. **7**, 221—225 (1959).
28. Characterization of some probability distributions. Skand. Aktuarietidskr. 65—67 (1958).
29. Some non-parametric tests for the k-sample problem. Colloquium math. **7**, 289—296 (1959).
30. On a result by M. ROSENBLATT concerning the von Mises-Smirnov test. Ann. math. Statistics **31**, 427—429 (1960).

31. A necessary and sufficient condition for the validity of the weak law of large number (with A. Ehrenfeucht). Bull. Acad. Polon. Sci. Sér. Sci. math. astron. phys. 8, 583—585 (1960).
32. On probability theory and its applications. Polskie Torsarzystro Chemiczne (1960).
33. Remarks on the sample functions of some stochastic processes. Bull. Acad. Polon. Sci. Sér. Sci. math. astron. phys. 8, 355—358 (1960).
34. Characterization of sample functions of stochastic processes by some absolute probabilities. Proc. 4th Berkeley Sympos. math. Statist. Probability II, 143—151 (1961).
35. Infinitely divisible distributions: recent results and applications. Ann. math. Statistics 33, 68—84 (1962).
36. On the continuity of the L-distribution functions. Z. Wahrscheinlichkeitstheorie verw. Geb. 1, 25—27 (1962).
37. On an inequality due to Gatti and Birnbaum. Metron 22, 110—112 (1962).
38. On the orthogonality of measures induced by L-processes. Trans. Amer. math. Soc. 106, 185—192 (1963).
39. A condition for absolute continuity of infinitely divisible distribution functions (with V. S. Varadarajan). Z. Wahrscheinlichkeitstheorie verw. Geb. 1, 335—339 (1962).
40. On the absolute continuity of measures induced by stationary L-processes. Unpublished Tech. Rpt. from Columbia University, 15 pp.
41. On Kolmogorov's continuity condition for sample functions. Unpublished Tech. Rpt. from Columbia University, 6 pp.

Books

(1) Rachunek prawdopodobienstwa i statystyka metematyczna [the calculus of probabilities and mathematical statistics], 374 pp. Warszawa: Panstwowe Wydawnictwo Naukowe 1954.
(2) Tablice statystyczne [statistical tables], edited by Wieslaw Sadowski, 158 pp. Warszawa: Panstwowe Wydawnictwo Naukowe 1957.
(3) Rachunek prawdopododobienstwa i statystyka matematyczna [theory of probability and mathematical statistic]. 2nd ed. revised and enlarged. Biblioteka Matematyczna 1958, 530 pp.
(4) Wahrscheinlichkeitsrechnung und mathematische Statistik. Hochschulbücher für Mathematik, Bd. 40, 1958, 528 pp.
(5) Wahrscheinlichkeitsrechnung und mathematische Statistik. Hochschulbücher für Mathematik, Bd. 40, 528 pp. Berlin: VEB Deutscher Verlag der Wissenschaften 1962.
(6) Probability theory and mathematical statistics. 675 pp. New York: John Wiley and Sons 1963.

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