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A. N. KOLMOGOROV AND STATISTICS: A CITATION BIBLIOGRAPHY[1]

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A bibliography is given of works by Kolmogorov of statistical interest and of statistical papers by others that have cited his work. Also listed separately are bibliographies of Kolmogorov's works in all fields.

Andrei Nikolaevich Kolmogorov (1903–1987) has a well-recognized, preeminent position in 20th century probability theory. In statistics, he is perhaps best known for his work on empirical distribution function suprema (Kolmogorov–Smirnov statistics). But a great many of his books and papers, not all of them statistical or even probabilistic, have had an influence in statistics.

The following bibliography lists chronologically, in boldface, works by Kolmogorov himself that are in statistics and/or have been cited in statistics papers. Following each Kolmogorov reference is a list of papers, alphabetically by author, that have cited it. We hope that readers, browsing through the list, will find papers of interest, possibly quite apart from their citations of Kolmogorov. For example, review articles with long bibliographies are naturally more likely to cite any given work, and so to turn up in lists like ours.

For papers that cited two or more works of Kolmogorov's there are cross-references. Bibliographies of Kolmogorov's works are listed in an Appendix.

The citations were nearly all found from *Science Citation Index* (1955–1984) and *Compumath Index* (1975–1989) under "Kolmogoroff" or "Kolmogorov;" for lack of time, most citers of works like "Gnedenko and Kolmogorov" where a coauthor was listed first are not included. Papers in statistics or applied probability that cited Kolmogorov are included here, omitting most papers in "pure" probability or other fields. In some cases where a work of Kolmogorov's has been most heavily cited in other literatures, that fact is noted in brackets.

It turned out to be quite time-consuming for the first author to find citations from a citation index, to find titles of citing papers in the source index and to decide on their statistical relevance and then for the coauthors to consult the original journals or books to confirm and correct the listings. Where this was not possible we checked in *Mathematical Reviews* and/or other review journals. We have given references to versions in English if we could find them.

On the topic of metric entropy (ε-entropy), Kolmogorov himself did not, so far as we know, undertake applications even in probability, but his work has

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indirectly had an influence on statistics. At the suggestion of the Editor, Willem Van Zwet, when this project began, we have also included citations on metric entropy that may not be directly statistical.

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APPENDIX

Bibliographies of Kolmogorov's works. The most extensive bibliographies we know are the one in [(**1985**), pages 452–466], which lists almost 400 works, and those following Shiryaev (1989a, b), listing, respectively, 477 and

518 works:

SHIRYAEV, A. N. (1989a). Andrey Nikolaevich Kolmogorov (25.IV.1903–20.X.1987) In Memoriam. *Teor. Verojatnast. i Primenen.* **34** 1–84; General list of basic works of A. N. Kolmogorov, 85–102. (In Russian.)

SHIRYAEV, A. N. (1989b). Kolmogorov: Life and creative activities. *Ann. Probab.* **17** 866–944; Publications of A. N. Kolmogorov. *Ann. Probab.* **17** 945–964.

The lists include some 180 research papers, 20 books (including school textbooks), almost 100 articles on mathematical education, 119 encyclopedia articles and 11 papers on poetry and literature.

Here is a chronological list of papers on Kolmogorov's 50th, 60th, 70th and 80th birthdays, commenting on the different periods of his work, with bibliographies.

ALEKSANDROV, P. S. and KHINCHIN, A. YA. (1953). Andrei Nikolaevich Kolmogorov (on his fiftieth birthday). *Uspekhi Mat. Nauk* **8** (3) 176–200. (In Russian.)

ALEKSANDROV, P. S. and GNEDENKO, B. V. (1963). A. N. Kolmogorov as a teacher. *Uspekhi Mat. Nauk* **18** (5) 115–123. [English translation in *Russian Math. Surveys* **18** (5) 111–119.]

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GNEDENKO, B. V. (1973). Andrei Nikolaevich Kolmogorov (on the occasion of his seventieth birthday). *Uspekhi Mat. Nauk* **28** (5) 5–15. [English translation in *Russian Math. Surveys* **28** (5) 5–17.]

BOGOLYUBOV, N. N., GNEDENKO, B. V. and SOBOLEV, S. L. (1983). Andrei Nikolaevich Kolmogorov (on his eightieth birthday). *Uspekhi Mat. Nauk* **38** (4) 11–26. [English translation in *Russian Math. Surveys* **38** (4) 9–27.]

Tables 1 and 2 give cumulative author indices from two review journals. Such journals, published in a given year, typically cover literature published a year or more earlier or, occasionally, several years before; that should be assumed in case only one of "Years of Reviews" and "Years of Publications" is given. The cumulative indices are typically published still later. In the

TABLE 1
Cumulative author indices—Mathematical Reviews

Years of Reviews	Years of Publications	Kolmogorov
1940–1959	1939–1958	57
1960–1964	1957–1963	20
1965–1972	1961–1971	25
1973–1979	1969–1978	27
1980, 1981		4
1982, 1983		17
1984, 1985		9

TABLE 2
Cumulative author indices—Zentralblatt für Mathematik und ihre Grenzgebiete

Volume	Covers Volumes	Years of Reviews	Years of Publications	Kolmogorov
62	**1–25**	1931–1942	1930–1941	54
63, I/II	**26–41, 60–61**	1942–1952	1939–1950	23
54	**42–45, 54**	1952–1953	1951	5
69	**46–53–** ···	1957–1961	1952, 1953	5
59	**55–59**	1954–1956	1954	4
76	**64–68, 70–75**		1955, 1956	7
63, III/IV	**77–100**		1957–1960	16
110, 120	**101–119**	1963–1966		13
130, 140	**121–139**	1966–1968		14
150, 160	**141–159**	1968–1969		6
170, 180	**161–179**	1969–1970		7
190, 200	**181–199**	1970–1971		5
210, 220	**201–219**	1971		6
250	**221–249**	1972–1973		14
300	**251–300**	1973–1975		9
350	**301–349**		1974–1977	11
400	**351–399**		1977–1979	7
450	**401–449**		1978–1981	5
500	**451–499**		1980–1983	22
550	**501–549**		1983–1985	14
600	**551–599**		1984–1986	12

rightmost column, under "Kolmogorov," are numbers of publications by Kolmogorov in the given cumulative index; only that column is specific to Kolmogorov.

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