Alfréd Rényi
1920—1970

1.

In February 1970 death took from our midst ALFRÉD RÉNYI, not yet forty nine years old. With his untimely death, we lost a mathematician of great inventionsness and fertility, enjoying a solid international reputation. He also was one of the founders of this periodical.

Alfréd Rényi was born in Budapest, on March 20th, 1920. From 1939 till 1944 he studied mathematics and physics at Budapest University. In 1945 he obtained his Ph. D. at Szeged University, working under the quidance of FRIGYES RIESZ. In 1946—47 he worked in Leningrad with professor Linnik. His stay in Leningrad decisively influenced his whole subsequent mathematical career: it was there that he began to work in probability theory. Probability theory, of paramount importance for the sake of its applications, was going at that time through a phase of rapid theoretical growth too. On returning to Hungary, he set himself the goal of educating a team of research workers for the promotion of this branch of mathematics. First he lectured on probability theory at Budapest University, but soon he followed a call to Debre-

cen, where the University offered him a chair devoted to teaching and research in probability theory. During his stay of less than two years in Debrecen, he decisively influenced the development of the University's Mathematics Department. His lectures on probability theory were a welcome novelty, and opened up fresh vistas. Also, within the vast field of mathematical analysis, he emphasized new trends, and he succeeded in instilling a new spirit into both teaching and research.

At this time he was not yet thirty. A young man himself, it was the company of the young he liked best. Nor did his sympathy for the young generation of mathematicians go unreciprocated. His interesting lectures of great suggestivity were very popular, and students often turned to him with their problems. He always has time for those interested in the beatiful problems of matehmatics, and already during his stay in Debrecen many young mathematicians got their start from him, later to win recognition in different branches of probability theory. Especial mention is due to his nighttime seminaries, at which often gifted beginners reported on problems more or less new to themselves, to initiate thereby a fertile discussion.

It was not only from the point of view of teaching and research that A. Rényi's professorship meant much for the Debrecen Mathematical Seminary. The three mathematicians entrusted at that time with the Seminary's leadership — they figure as founders on the title page of this journal — strove to create the conditions indispensable for modern mathematical research: a library wellfurnished with books and mathematical periodicals, and for the sake of publicational possibilities and closer international contacts the creation of an international periodical Each of the three founders did his best towards achieving these gvals; among them Rényi with his agility, his devotion to the cause, and his international connections already quite extensive at that time, had an important part in the success. From the point of view of the Debrecen Mathematical Seminary it is regrettable, that A. Rényi was soon entrusted with the direction of the Institute for Applied Mathematics (later: Mathematical Research Institute) of the Hungarian Academy of Science. On his occupying this new position of great responsibility, his official connections with Debrecen University came to an end. He conserved however till the end of his life his interest in the ulterior development fo that institution in which he obtained his first professorship and in which he decisively influenced the career of many a young mathematician. He continued to visit Debrecen once or twice every year. He also laid great emphasis on close contacts between the Research Institute of which he was Chairman, and the Debrecen Mathematical Seminary. It was in conformity with his ideas that a subdivision of the Mathematical Research Institute located in Budapest was founded in Debrecen, with a research profile oriented towards probability theory and mathematical statistics. As Cahirman of the Mathematical Research Institute of the Hungarian Academy of Sciences, and later also as Secretary of the Academy's Class of Mathematical and Physical Sciences, he had a decisive word to say in every matter connected with teaching and research in mathematics, or with the functioning of the mathematical societies of our country. Particular mention is due to his organizing and directing the work of a series of conferences on probability theory and mathematical statistics. Held at different places of our country, these conferences offered to Hungarian probabilists a welcome opportunity for the exposition of their results, often of international importance, cementing thereby that Hungarian school of probability theory, the creation of which is wholly due to Rényi's unique effort. We are glad to note that several of these conferences took place in Debrecen.

The last twenty-four years of A. Rényi's life were spent in ceaseless work. During this time he produced more than two-hundred research papers and numerous other publications. He was the author of highly successful books: His handbook of probability theory, the Hungarian editions of which played a decisive role in raising the standards of probabilistic culture in our country, appeared also in German French and English translations. This book is very popular not only with students and aspirants, but also with specialists of every kind who are faced in their work with problems of a probabilistic nature. Addressed to the wider public of educated laymen, his ,,Dialogues on mathematics" and his ,,Letters on probability" are equally important. Both of these can serve as models of popular scientific literature. They have been translated into both English, German, Italian, Rumanian, Russian.

Within the limits of this brief obituary it would be impossible to give an evaluation, however sketchy, of A. Rényi's scientific achievements. It must be noted, however, that his interests were not only due to, and his numerous important results were not exclusively achived in the fields of probability, mathematical statistics and adjoining sciences like e.g. information theory. Quite a number of interesting new results is due to him also in other branches of matehmatics, such as the theory of numbers, combinatorial analysis, function theory, operational analysis etc. All this shows that he was a mathematician of an exceptionally inventive mind. Once he started meditating on a problem, the ideas teeming in his fertile imagination forced him as it were to work them out in detail. It is interesting to note that there was no research worker in natural sciences, in technology and even in the field of humanities who on addressing himself to Rényi for a mathematical model, would not have received some helpful idea, providing often the first impetus in the direction of important later developments.

His activity found due appreciation, and his rising scientific career was parallelled by a rise in positions and responsibilities: We already mentioned that he was until his death Chairman of the Mathematical Research Institute of the Hungarian Acadecademy of Sciences. The chair of probability theory of the Eötvös University in in Budapest was organized for him in 1952. At this chair he became the educator of a long series of disciples. He attached great importance to university teaching work, and considered participation in it highly advisable also for primarily research oriented mathematicians. His seminaries, regularly held in the Research Institute he headed, left a lasting impression. The Hungarian Academy of Sciences elected him an ordinary member, and he was awarded the Kossuth prize twice in acknowledge of his scientific achievements. He held also many other decorations. He was a member of the presidency of the János Bolyai Mathematical Society, and a vice-president of the International Mathematical Institute He played an important role in connection with the foundation of the International Association for Statistics in the Physical Sciences, and actively participated in the Association's work till the end of his life. He was redactor of the "Studia Scientiarum Mathematicarum Hungariae" and he belonged to the redactorial boards of the following international mathematical periodicals: Acta Mathematica, Annales Sci. Math., Publicationes Mathematicae, Matematikai Lapok, Zeitschrift für Wahrscheinlichkeitstheorie, Journal of Applied Probability, Journal of Combinatorial Analysis, Information and Control.

He held guest professor-ships of shorter or longer duration at a number of universities abroad, and he was member of several international mathematical societies.

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As can be seen from the foregoing, A. Rényi had close connections with each of the three Hungarian universities of science, and the leading role he played in Hungarian mathematical life was by no means restricted by the orgazatorial frame of any university. Nevertheless we feel that Debrecen was for him the place of fruitful beginnings; it was here that he laid the foundations for many a project brought later to fruition. Therefore we feel that Debrecen too had played a role of some importance in the life of the scientist, who played such an important part in organizing Hungarian mathematical life and in furthering probabilistic research in Hungary. His activity, from which our whole country benefited, bore ample fruit in Debrecen too. This very periodical to the foundation of which he decisively contributed, bears witness to his untiring activity, and will always help to preserve his memory.

B. Gyires

2.

As we have already pointed out, it would require a voluminous study to give an adequate characterization of the life work of Alfréd Rényi. Nor is it the place here to elucidate the influence he exercised upon contemporary mathematical life: his publications were often quoted in research papers, and not only these, but also his orally given suggestions and communications. Nevertheless, in order to give some idea of the extent of his scientific life work, let us make follow here a list of Alfréd Rényi's publications, as compiled by PÁL MEDGYESSY. This list does not iclude book reviews, forewords to new periodicals, lectures delivered at Hungarian congresses, summaries appeared in "Matematikai Lapok", lectures delivered at seminaries in the Institute for Applied Mathematics (Mathematical Research Institute) of the Hungarian Academy of Sciences, summaries published in the Communications of the Research Institute, secretarial reports delivered at the Third Class of the Hungarian Academy of Sciences, articles unrelated to mathematics, etc.

1945

1. On the summability of Cauchy-Fourier series.* (Hungarian.) *Doctor's thesis. Szeged,* 1945. *(Manuscript).*

1946

1. On a Tauberian theorem of O. Szász. *Acta Sci. Math. Szeged* **11** (1946/48), 119—123.
2. Integral formulae in the theory of convex curves. *Acta Sci. Math. Szeged* **11** (1946/48), 158—166.

1947

1. On the minimal number of terms of the square of a polynomial. *Hung. Acta Math.* **1** (1946/49), 30—34.
2. On the representation of even numbers as the sum of a prime and of an almost prime number. (Russian.) *Dokl. Akad. Nauk SSSR.* **56** (1947), 455—458.
3. On the representation of even numbers as the sum of a prime and of an almost prime number. *(Russian) Candidates's thesis.* Leningrad, 1947. *(Manuscript.)*

* Supposed title.

4. On a new application of a method of academician I. M. Vinogradov. *Dokl. Akad. Nauk SSSR.* **56** (1947), *(Russian.)* 675/678.
5. On some hypotheses of the theory of Dirichlet characters. (Russian, with Ju V. Linnik.) *Izv. Akad. Nauk SSSR.* **11** (1947), 539—546.

1948

1. On the representation of even numbers as the sum of a prime and of an almost prime number. *(Russian.) Izv. Akad. Nauk SSSR.* **12** (1948) 57—78. (Cf. 1947/3.)
2. Play with chance. *Középisk. Mat. Lapok* **1** (1948), 101—111. *(Hungarian.)*
3. Play with chance II. *Középisk. Mat. Lapok* **1** (1948), 144—157. *(Hungarian.)*
4. Simple proof of a theorem of Borel and of the law of the iterated logarithm. *Mat. Tidsskrift B.* (1948), 41—48.
5. Remarque a la note précédente. (To the paper of G. ALEXITS: Sur la convergence des séries lacunaires. *Acta Sci. Math. Szeged* **11** (1946/48), 251—253.) *Acta Sci. Math. Szeged* **11** (1946/48) 253.
6. Generalization of the "large sieve" of Ju. V. Linnik, *Math. Centrum,* Amsterdam (1948), 5 p *(Litoprint.)*
7. On the zeros of the L-function of Dirichlet. *Math. Centrum, Amsterdam* (1948), 4 p *(Litoprint)*
8. Proof of the theorem that every integer can be represented as the sum of a prime and an almost prime. *Math. Centrum,* Amsterdam (1948), 3 p *(Litoprint.)*

1949

1. On the representation of the numbers 1, 2, ..., N with the help of differences. (Russian, with L. RÉDEI.) *Mat. Sbornik* **24** (1949), 385—389.
2. Some remarks on independent random variables. *Hung. Acta Math.* **1** (1946/49), 17—20.
3. On the measure of equidistribution of point sets. *Acta Sci. Math. Szeged* **13** (1949), 77—92.
4. Un nouveau théoreme concernant les fonctions indépendantes et ses applications a la théorie des nombres. *Jour. Math. Pures Appl.* **28** (1949), 137—149.
5. Thirty years of Soviet Mathematics. *Természet és Technika* **108** (1949), 220—226. *(Hungarian.)*
6. Probability methods in number theory. *Publ. Math. Coll. Budapest* **1** (1949), No. 21. 9 p.
7. Sur un théoréme général de probabilité. *Annales Inst. Fourier* **1** (1949), 43—52.
8. On the coefficients of schlicht functions. *Publ. Math. Debrecen* **1** (1949), 18—23.
9. Thirty years of Soviet Mathematics. I. On the foundations of probability theory. *Mat. Lapok* **1** (1949/50), 27—64. *(Hungarian.)*

1950

1. On the theorem of Erdős and Turán. *Proc. Amer. Math. Soc.* **1** (1950), 7—10.
2. Some problems and results on consevutive primes. (With P. ERDŐS.) *"Simon Stevin"* **27** (1949/50), 115—125.
3. Thirty years of Soviet Mathematics II. New directions within probability theory. *Mat. Lapok* **1** (1949/50), 91—137. *(Hungarian)*
4. On the large sieve of Ju. V. Linnik. *Comp. Math.* **8** (1950), 68—75.
5. On the geometry of conformal mapping. *Acta Sci. Math. Szeged* **12** (1950) Pars B, 215—222.
6. On the algebra of distributions. *Publ. Math. Debrecen* **1** (1950), 135—149.
7. On the mathematical theory of chopping. *Épitőanyag* **2** (1950) 9—10. 7. p. *(Hungarian)*
8. On Newton's method of root approximation. *Mat. Lapok* **1** (1949/50), 278—293. *(Hungarian)*
9. On the summability of Cauchy-Fourier series. *Publ. Math. Debrecen* **1** (1950), 162—164. (Cf. 1945/1)
10. On a general theorem of probability theory and its application to number theory. Zprávy o spolecnem 3. sjezdu matematiku Ceskoslovenskych a 7. sjezdu matematiku Polskych, *Praha,* 1950. *Casopis Pest. Mat.* **74** (1949), 167—175. *(Russian)*
11. On the theory of limit theorems for sums of independent random variables. *Acta Math. Acad. Sci. Hung.* **1** (1950), 99—108. *(Rudssian.)*
12. The struggle against formalism in teaching mathematics. A középiskolai matematikatanítás kérdései. *Szocialista Nevelés Kiskönyvtára,* **4.** Budapest (1950), 24—28. *(Hungarian.)*

13. Remarks concerning the zeros of certain integral functions. *C. R. Acad. Bulg. Sci.* **3** (1950), No. 2—3, 9—10.
14. On composed Poisson distributions, I. (With L. JÁNOSSY and J. ACZÉL.) *Acta Math. Acad. Sci. Hung.* **1** (1950), 209—224.
15. Probability theory. * 1949—50. I. f. é.—II. f. é. *University lecture notes. Debrecen*, 1950. *(Hungarian.)*
16. Probability theory.** *University lecture notes. Budapest*, 1950. *(Hungarian)*.

1951

1. On a new generalization of the central limit theorem of probability theory. *MTA III. Osztk. Közl.* **1** (1951), 351—355. (Cf.: 1950/11. *(Hungarian.)*
2. On the tasks of the Institute for Applied Mathematics of the Hungarian Academy of Sciences. *Akad. Ért.* **58** (1951), 483. part, 20—26. *(Hungarian.)*
3. On some problems concerning Poisson-processes. *MTA III. Oszt. Közl.* **1** (1951), 202—212. *(Hungarian)*
4. On some problems concerning Poisson processes. *Publ. Math. Debrecen* **2** (1951), 66—73.
5. Sur l'Indépendance des domaines simples dans l'espace euclidien a n-dimensions. (With K. RÉNYI and J. SURÁNYI.) *Colloq. Math.* **2** (1951), 130—135.
6. On composed Poisson distributions. (I. with L. JÁNOSSY and J. ACZÉL.) *MTA III. Oszt. Közl.* **1** (1951), 315—338. (Cf.: 1950/14.) *(Hungarian.)*
7. On the foundations of probability theory. *Annuaire Fac. Sci. Phys. Math., Univ.Sofia, Livre 1, Partie I.* **47** (1951), 227—236. *(Russian.)*
8. On the foundations of probability theory. (Czech.) *Math. Ustav Ceskoslovenske Akad. Ved.,* Praha, 1951. 10 p *(Litoprint)* (Cf.: 1951/7)
9. On composed Poisson distributions. II. *Acta Math. Acad. Sci. Hung.* **2** (1951) 83—98.
10. On composed Poisson distributions. II. MTA III. Oszt. Közl. **1** (1951), 329—341. (Cf.: 1951/9.) *(Hungarian.)*
11. Two proofs for a theorem of L. Jánossy. With P. TURÁN, *MTA III. Oszt. Közl.* **1** (1951), 369—370. *(Hungarian.)*
12. Remark. *(Hungarian)*, to the following: Hómunkások víz- és sóanyagcseréje. — A matematikai statisztika módszereinek alkalmazása az orvostudományban. *Orvosi Hetilap* **92** (1951) 29. 20 p. Orvosi Hetilap **92** (1951) 29. 6 p.
13. On the approximation of measurable functions. (With L. PUKÁNSZKY.) *Publ. Math. Debrecen* **2** (1951), 146—149.
14. Complex function theory. University lecture notes. Tankönyvkiadó 1. Jegyzetsokszorosító, *Budapest*, 1951. 34 p. *(Hungarian.)*
15. Complex function theory. University lecture notes. VKM 2. Jegyzetsokszorosító, *Budapest*, 1951. 69 p. *(Hungarian)*.

1952

1. Stochastical independence and complete systems of functions. (Hungarian). *Az Első Magyar Matematikai Kongresszus Közleményei.* (1950. augusztus 27.—szeptember 2.) *Budapest*, 1952; pp. 299—308.
2. Stochastical independence and complete systems of functions. *Az Első Magyar Matematikai Kongresszus Közleményei.* (1950. augusztus 27.—szeptember 2.) *Budapest*, 1952; pp. 309—316. (Cf.: 1952/1.) *(Russian)*.
3. On a conjecture of H. Steinhaus. *Annales Soc. Polon. Math.* **25** (1952), 279—287.
4. Remark. (Hungarian, to Kalmár László: A matematika alapjaival kapcsolatos újabb eredmények. *MTA III. Oszt. Közl.* **2** (1952), 89—103, 104—107.
5. New results in probability theory. *MTA III. Oszt. Közl.* **2** (1952), 125—139. *(Hungarian.)*
6. On A. Ja. Hincin's book "Analytical methods of statistical mechanics." (With I. Fényes.) *MTA III. Oszt. Közl.* **2** (1952), 275—280. *(Hungarian.)*
7. The principial questions of probability theory in the light of dialectical materialism. *Filozófiai Évkönyv.* 1952. *Budaoest*, 1952; pp. 63—97. *(Hungarian.)*

* Supposed title.
** Supposed title. Issued probably in several parts.

8. On projections of probability distribution. *Acta Math. Acad. Sci. Hung.* **3** (1952), 131—142.
9. On the mathematical work of Charles Jordan. *Mat. Lapok* **3** (1952), 111—121. *(Hungarian.)*
10. Probabilistic determination of the basic supply of machine spare parts and articles of equipment. (Hungarian,) (With T. SZENTMÁRTONY.) *Mat. Lapok* **3** (1952), 129—139.
11. Probabilistic determination of the required amount of electric energy, as well as of the simultaneity and necessity factors in plants of the machine industry. (With T. SZENTMÁRTONY.) *MTA Alk. Mat. Int. Közl.* **1** (1952), 85—104. *(Hungarian.)*
12. On the rational proportioning of compressors and of containers of air for supplying plants with compressed air. *MTA Alk. Mat. Int. Közl.* **1** (1952), 105—138. *(Hungarian.)*
13. On processes of happening due to Poisson processes and on their uses in technology and physics. (With L. TAKÁCS.) *MTA Alk. Mat. Int. Közl.* **1** (1952), 139—146. *(Hungarian.)*
14. Remarks on a paper by Pál Gombás and Rezső Gáspár. *MTA Alk. Mat. Int. Közl.* **1** (1952), 393—397. *(Hungarian.)*
15. On the zeros of polynomials. (With P. TURÁN.) *Acta Math. Acad. Sci. Hung.* **3** (1952), 275—284.
16. János Bolyai, the great revolutionary of science. *Mat. Lapok* **3** (1952), 173—178. *(Hungarian.)*
17. Probability theory*. University lecture notes. Felsőoktatási Jegyzetellátó Vállalat, *Budapest,* 1952. *(Hungarian.)*

1953

1. On a conjecture of H. Steinhaus. *MTA III. Oszt. Közl.* **3** (1953), 37—44. (Cf.: 1952/3.) *(Hungarian.)*
2. On strengthening the connection between mathematics and practice. *Priroda,* (1953), 69—73. *(Russian.)*
3. A remark on the angles of a polygon. *Casopis Pest Mat.* **78** (1953), 305—306. *(Czech.)*
4. On the projections of probability distributions. *MTA III. Oszt. Közl.* **3** (1953), 59—69. (Cf.: 1952/8.) *(Hungarian.)*
5. On the scientific and ideological importance of János Bolyai's discovery. *Természet és Technika* **112** (1953), 1—3. *(Hungarian.)*
6. Ideological importance of the geometry of Bolyai—Lobacevskij. *MTA III. Oszt. Közl.* **3** (1953), 253—273. ő*Hungarian.)*
7. Ideological importance of the geometry of Bolyai—Lobacevskij. *Casopis Pest. Mat.* **78** (1953), 149—168. (Cf.: 1953/6.) *(Czech.)*
8. Remark. To Jánossy Lajos: Beszámoló a berlini fizikus kongresszus egyes problémáiról.) *MTA III. Oszt. Közl.* **3** (1954) 323—325, (1953), 326—327. *(Hungarian.)*
9. Remark. To Gombás Pál: Elméleti fizikai kutatásokban alkalmazott matematikai módszerek különös tekintettel a kvantummechnaikai közelítő módszerekre.) *MTA III. Oszt. Közl.* **3** (1953), 329—340, 344—347. *(Hungarian.)*
10. The work of the Institute of Applied Mathematics in the field of industrial applications of probability theory. *MTA III. Oszt. Közl.* **3** (1953), 363—372. *(Hungarian.)*
11. On the theory of order statistics. *Acta Math. Acad. Sci. Hung.* **4** (1953), 191—231.
12. On the theory of ordered samples. *MTA III. Oszt. Közl.* **3** (1953), 467—503. (Cf.: 1953/11.). *(Hungarian.)*
13. Eine neue Methode in der Theorie der geordneten Stichproben. *Bericht über die Mathematiker-Tagung in Berlin, Januar 1953.* Berlin, 1953; pp. 203—212.
14. Remark. (To: Ankét O. J. Schmidt „Négy előadás a Föld keletkezésének elméletéről" című könyvéről.) *MTA III. Oszt. Közl.* **3** (1953), 579—601, 595—600. *(Hungarian.)*
15. The discussion of chemical reactions with the help of the theory of stochastic processes. *MTA Alk. Math. Int. Közl.* **2** (1953), 85—101. *(Hungarian.)*
16. New criteria for comparing two samples. *MTA Alk. Mat. Int. Közl.* **2** (1953), 243—265. *(Hungarian.)*
17. On the basic notions of probability theory. *Mérnöki Továbbképző Intézet előadássorozatából.* Felsőoktatási Jegyzetellátó Vállalat, *Budapest,* 1953. 51. p. (Hungarian)
18. On replacing stock in a storehouse. I. (With I. PALÁSTI, T. SZENTMÁRTONY and L. TAKÁCS.) *MTA Alk. Mat. Int. Közl.* **2** (1953), 187—201. *(Hungarian.)*
19. Probability theory**. University lecturenotes. *(Hungarian.)* Felsőoktatási Jegyzetellátó Vállalat, *Budapest,* 1953.

* Supposed title. Issued in several instalments.
** Supposed title. Issued in several instalments.

1954

1. The fundamental problems of probability theory in the light of dialestical materialism. *Casopis Pest. Mat.* **79** (1954), 189—218. (Cf.: 1952/7.) *(Czech.)*
2. Elementary proofs of some basic facts concerning order statistics (With G. HAJÓS.) *Acta Math. Acad. Sci. Hung.* **5** (1964), 1—6.
3. The ideological importance of the geometry of Bolyai—Lobacevskij. *Acta Math. Acad. Sci. Hung.* **5**, *Supplement*, (1954), 21—42. (Cf.: 1953/6.) *(Russian.)*
4. A new axiomatic buildup of probability theory. *MTA III. Oszt. Közl.* **4** (1954), 369—427. *(Hungarian.)*
5. A brief survey of the history of probability theory. *MTA III. Oszt. Közl.* **4** (1954), 447—466. *(Hungarian.)*
6. Probability theory. Tankönyvkiadó, *Budapest,* 1954. *(Hungarian.)*
7. Elemtary proofs for some fundamental relations in the theory of ordered samples. (With G. Hajós.) *MTA III. Oszt. Közl.* **4** (1954), 467—472. (Cf.: 1952/2.) *(Hungarian.)*
8. Mathematical treatment of fractional chemical division in the case of noncomplete diffusion. (With P. MEDGYESSY, K. TETTAMANTI and I. VINCZE.) *MTA Alk. Mat. Int. Közl.* **3** (1954), 81—97. *(Hungarian.)*
9. On the schlichtness of the complex potential. I. (With K. Rényi.) MTA Alk. Mat. Int. Közl. **3** (1954), 353—367. *(Hungarian.)*
10. Die prinzipiellen Fragen der Wahrscheinlichkeitsrechnung im Lichte des dialektischen Matemrialismus. *Philosophisches Jahrbuch,* 1952. Akadémiai Kiadó, *Budapest,* 1954; pp. 7—8.
11. Remark. To Sedlmayer Kurt: Nagyobb termések elérésének tudományos alapjai. *MTA IV. Oszt. Közl.* **5** (1954), 138—200. *(Hungarian.)*
12. On a combinatorial problem connected with improving alfalfa. (Lecture: *Matematikai Statisztikai Kollokvium. 1954.* szeptember hó 27—29. *Jósvafő.)* Summary: Az 1954. szeptember hó 27-étől 29-ig Jósvafőn, a Bolyai János Matematikai Társulat által rendezett Matematikai Statisztikai Kollokviumon elhangzott előadások kivonatai. Bolyai János Matematikai Társulat, *Budapest,* 1954; pp. 13—15. *(Hungarian.)*
13. Unsolved problems in the theory of ordered samples. A report. (Lecture: *Matematikai Statisztikai Kollokvium. 1954.* szeptember hó 27—29., *Jósvafő.)* Summary: Az 1954. szeptember hó 27-től 29-ig Jósvafőn, a Bolyai János Matematikai Társulat által rendezett Matematikai Statisztikai Kollokviumon elhangzott előadások kivonatai. Bolyai János Matematikai Társulat, *Budapest,* 1954; pp. 18—20. *(Hungarian.)*

1955

1. On a combinatorial problem arising in connection with improving alfalfa. *Mat. Lapok* **6** (1955), 151—164. *(Hungarian.)*
2. On the completeness of certain trigonometic systems. (With J. Czipszer.) *MTA III. Oszt. Közl.* **5** (1955), 391—410. *(Hungarrian.)*
3. The development of mathematics in our contry since the liberation. (With G. ALEXITS and G. HAJÓS.) A magyar tudomány 10 éve. 1945—1955. Akadémiai Kiadó, *Budapest,* 1955; pp. 87—106. *(Hungarian.)*
4. Generalization of an inequality of Kolmogorov. (With J. HÁJEK.) *Acta Math. Acad. Sci. Hung.* **6** (1955), 281—283.
5. On a nex axiomatic theory of probability. *Acta Math. Acad. Sci. Hung.* **6** (1955), 285—335.
6. On the theory of stochastic processes and on some technical applications. *(Mérnöki Továbbképző Intézet előadássorozatából.)* Felsőoktatási Jegyzetellátó Vállalat, *Budapest,* 1955. 78. p. *(Hungarian.)*
7. On the density of certain sequences od integers. *Publ. Inst. Math. Acad. Serve Sci., Beogrod* **8** (1955), 157—162.
8. Mathematical statistics.* University lecture notes. Jegyzetsokszorosító, *Budapest,* 1955. *(Hungarian.)*

* Supposed title. Issued probably in several instalments.

1956

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