

## List of Publications of G. G. Lorentz

### PAPERS

1. Über lineare Summierungsverfahren, *Mat. Sbornik* **39** (1932), 44–51.
2. Funktionale und Operationen in den Räumen der Zahlenfolgen, *Dokl. Akad. Nauk SSSR (N.S.)* **1** (1935), 81–85.
3. Sur la convergence forte des polynomes de Stieltjes–Landau, *Mat. Sb.* **1** (1935), 81–85.
4. Zur Theorie der Polynome von S. Bernstein, *Mat. Sb.* **2** (1937), 543–556.
5. Absolute convergence (in Russian), *U. Zap. Leningrad. Univ.* **83** (1941), 30–41.
6. Über die Mittelwerte der Funktionen eines Orthogonalsystems, *Math. Z.* **49** (1944), 724–733.
7. Über den Gausschen Integralsatz, (Tübingen) *Bericht Math.* (1947), 94–96.
8. Beziehungen zwischen den Umkehrätzen der Limitierungstheorie, Tübingen, *Bericht Math.* (1947), 97–99.
9. Beweis des Gausschen Integralsatzes, (Habilitationsschrift, Universität Frankfurt) *Math.* **51** (1947), 61–81.
10. Über Limitierungsverfahren, die von einem Stieltjes–Integral abhängen, *Acta Math.* **79** (1947), 255–272.
11. Eine Bemerkung über Limitierungsverfahren, die nicht schwächer als ein Cesàro–Verfahren sind, *Math. Z.* **51** (1948), 85–91.
12. Fourier–Koeffizienten und Funktionenklassen, *Math. Z.* **51** (1948), 135–149.
13. (WITH E. KAMKE) Über das Dirichletsche Prinzip, *Math. Z.* **51** (1948), 217–232.
14. Tauberian theorems and Tauberian conditions, *Trans. Amer. Math. Soc.* **63** (1948), 226–234.
15. Über die Dichte des Potentials einer räumlichen Belegung, *Math. Z.* **51** (1948), 226–234.
16. Über die Grenzwerte in Verbänden, *Math. Z.* **51** (1948), 404–422.
17. A contribution to the theory of divergent sequences, *Acta Math.* **80** (1948), 167–190.
18. Operations in linear metric spaces, *Duke Math. J.* **15** (1948), 755–761.
19. Einige neue Funktionalräume, *Arch. Math. (Basel)* **1** (1948), 225.
20. A problem of plane measure, *Amer. J. Math.* **71** (1949), 417–426.
21. Minimalfolgen und das Dirichletsche Prinzip, *Math. Z.* **51** (1949), 696–699.
22. Direct theorems on methods of summability, *Canad. J. Math.* **1** (1949), 304–319.
23. (WITH K. KNOPP) Beiträge zur absoluten Limitierung, *Arch. Math. (Basel)* **2** (1949), 9–16.
24. Some new functional spaces, *Ann. of Math.* **51** (1950), 37–55.
25. Deferred Bernstein polynomials, *Proc. Amer. Math. Soc.* **1** (1951), 72–76.
26. Direct theorems on methods of summability II, *Canad. J. Math.* **3** (1951), 236–256.
27. On the theory of spaces A, *Pacific J. Math.* **1** (1951), 411–429.
28. Direct theorems on methods of summability, in *Proceedings of the International Congress of Mathematicians*, Vol. 1, pp. 417–418, 1952.
29. Riesz methods of summation and orthogonal series, *Trans. Roy. Soc. Canada, Ser. III*, **45** (1952), 19–32.
30. Multiply subadditive functions, *Canad. J. Math.* **4** (1952), 455–462.
31. (WITH M. S. MACPHAIL) Unbounded operators and a theorem of A. Robinson, *Trans. Roy. Soc. Canada, Ser. III*, **45** (1952), 33–37.

32. An inequality for rearrangements, *Amer. Math. Monthly* **60** (1953), 176–179.
33. Multiplicity of representation of integers by sums of elements of two given sets, *J. London Math. Soc.* **20** (1953), 464–467.
34. (WITH D. G. WERTHEIM) Representation of linear functionals on Köthe spaces, *Canad. J. Math.* **5** (1953), 568–575.
35. (WITH M. S. MACPHAIL) Direct theorems on methods of summability: absolute summability functions, *Math. Z.* **59** (1953), 231–246.
36. (WITH A. ROBINSON) Core-consistency and total inclusion for methods of summability, *Canad. J. Math.* **6** (1954), 27–34.
37. Tauberian theorems for absolute summability, *Arch. Math. (Basel)* **5** (1954), 469–475.
38. On a problem of additive number theory, *Proc. Amer. Math. Soc.* **5** (1954), 838–841.
39. Borel and Banach properties of methods of summation, *Duke Math. J.* **22** (1955), 129–141.
40. (WITH KY FAN) An integral inequality, *Amer. Math. Monthly* **61** (1954), 626–631.
41. Majorants in spaces of integrable functions, *Amer. J. Math.* **77** (1955), 484–492.
42. (WITH K. L. ZELLER) Über Paare von Limitierungsverfahren, *Math. Z.* **68** (1958), 428–438.
43. (WITH K. L. ZELLER) Series rearrangements and analytic sets, *Acta Math.* **100** (1958), 149–169.
44. (WITH P. ERDÖS) On the probability that  $n$  and  $g(n)$  are relatively prime, *Acta Arith.* **5** (1958), 35–44.
45. (WITH B. J. EISENSTADT) Boolean rings and Banach lattices, *Illinois J. Math.* **3** (1959), 524–531.
46. Approximation of smooth functions, *Bull. Amer. Math. Soc.* **66** (1960), 124–125.
47. Remark on a paper of Visser, *J. London Math. Soc.* **35** (1960), 205–208.
48. (WITH B. J. EISENSTADT) Concave functions, rearrangements and Banach lattices, *Michigan Math. J.* **7** (1960), 161–170.
49. Lower bounds for the degree of approximation, *Trans. Amer. Math. Soc.* **97** (1960), 25–34.
50. Relations between function spaces, *Proc. Amer. Math. Soc.* **12** (1961), 127–132.
51. (WITH W. B. JURKAT) Uniform approximation by polynomials with positive coefficients, *Duke Math. J.* **28** (1961), 463–474.
52. Metric entropy, widths, and superpositions of functions, *Amer. Math. Monthly* **69** (1962), 469–485.
53. The degree of approximation by polynomials with positive coefficients, *Math. Ann.* **151** (1963), 239–251.
54. (WITH K. L. ZELLER) Strong and ordinary summability, *Tohoku Math. J.* **15** (1963), 315–321.
55. (WITH K. L. ZELLER) Abschnitts-limitierbarkeit und der Satz von Hardy-Bohr, *Arch. Math. (Basel)* **15** (1964), 208–213.
56. (WITH K. L. ZELLER) Summation of sequences and summation of series, *Proc. Amer. Math. Soc.* **15** (1964), 743–746.
57. Entropy and its applications, *J. Soc. Industr. Appl. Math. Ser. B, Numerical Analysis*, **1** (1964), 97–103.
58. “Inequalities and the Saturation Classes of Bernstein Polynomials on Approximation Theory” (P. L. Butzer and J. Korevaar, Eds.), Proceedings of the Conference at Oberwolfach, ISNM Vol. 5, pp. 200–207, Birkhäuser Verlag, Basel and Stuttgart, 1964.
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60. Russian literature on approximation in 1958–1964, in "Approximation of Functions," (H. L. Garabedian, Ed.) Proceedings of the Symposium at General Motors Research Laboratories, pp. 191–215, Elsevier, Amsterdam, 1965.
61. Metric entropy and approximation, *Bull. Amer. Math. Soc.* **72** (1966), 903–937.
62. Das mathematische Werk von F. Hausdorff, *Jber. Deutsch Math.-Verein.* **69** (1967), 54–62.
63. (WITH T. SHIMOGAKI) Interpolation theorems for operators in function spaces, *J. Functional Analysis* **2** (1968), 31–51.
64. Derivatives of polynomials with positive coefficients, *J. Approximation Theory* **1** (1968), 1–4.
65. (WITH K. L. ZELLER) Degree of approximation by monotone polynomials I, *J. Approximation Theory* **1** (1968), 501–504.
66. (WITH K. L. ZELLER) Gleichmässige Approximation durch monotone Polynome, *Math. Z.* **109** (1969), 87–91.
67. (WITH K. L. ZELLER) Degree of approximation by monotone polynomials II, *J. Approximation Theory* **2** (1969), 265–269.
68. (WITH T. SHIMOGAKI) Majorants for interpolation theorems, *Publications of the Ramanujan Institute* **1** (1969), 115–122.
69. (WITH T. SHIMOGAKI) Interpolation theorems for spaces  $A$ , in "Abstract Spaces and Approximation," (P. L. Butzer and B. Sz.-Nagy, Eds.), Proceedings of the Conference at Oberwolfach, ISNM No. 10, pp. 94–98, Birkhäuser Verlag, Basel und Stuttgart, 1969.
70. (WITH K. L. ZELLER) Monotone approximation by algebraic polynomials, *Trans. Amer. Math. Soc.* **149** (1970), 1–18.
71. (WITH K. L. ZELLER) Birkhoff interpolation, *SIAM J. Numer. Anal.* **8** (1971), 43–48.
72. (WITH T. SHIMOGAKI) Interpolation theorems for pairs of spaces  $L^p$ ,  $L^q$  and  $L^1$ ,  $L^1$ , *Trans. Amer. Math. Soc.* **159** (1971), 207–221.
73. (WITH H. BERENS) Inverse theorems for Bernstein polynomials, *Indiana Univ. Math. J.* **21** (1972), 693–708.
74. Monotone approximation, (O. Shisha, Ed.), in "Inequalities III," Proceedings of the Third Symposium on Inequalities, pp. 201–215, Academic Press, New York, 1972.
75. (WITH L. L. SCHUMAKER) Saturation of positive operators, *J. Approximation Theory*, **5** (1972), 413–424.
76. Birkhoff approximation and the problem of free matrices, *J. Approximation Theory*, **6** (1972), 283–290.
77. Positive and monotone approximation, in "Linear Operators and Approximation," (P. L. Butzer, B. Sz.-Nagy and J. P. Kahane, Eds.), Proceedings of the Conference at Oberwolfach ISNM Vol. 20, pp. 284–291, Birkhäuser Verlag, Basel and Stuttgart, 1972.
78. (WITH H. BERENS) Theorems of Korovkin type for positive linear operators in Banach lattices, in "Approximation Theory," (G. G. Lorentz, Ed.), pp. 1–30, Academic Press, New York, 1973.
79. (WITH H. BERENS) Sequences of contractions of  $L^1$ -spaces, *J. Functional Analysis* **15** (1974), 155–165.
80. (WITH K. L. ZELLER)  $o$ -but not  $O$ -Tauberian theorems, *Proc. Amer. Math. Soc.* (in print).
81. (WITH K. L. ZELLER) Birkhoff interpolation problem: coalescence of rows. *Arch. Math. (Basel)* (in print).
82. The Birkhoff interpolation problem, new methods and results, in "Linear Operators and Approximation II," (P. L. Butzer and B. Sz.-Nagy, Eds.), Proceedings of the

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83. Zeros of splines and Birkhoff's kernel (submitted for publication).
84. (WITH H. BERENS) Korovkin theorem for sequences of contractions on  $L^p$ -spaces, in "Linear Operators and Approximation II," (P. L. Butzer and B. Sz.-Nagy, Eds.), Proceedings of the Conference at Oberwolfach ISMN No. 25, Birkhäuser Verlag, Basel and Stuttgart, 1974.
85. On the 13-th problem of Hilbert, "Mathematical Developments Arising from the Hilbert Problems," Proceedings of Symposia in Pure Mathematics, Vol. 28 (De Kalb, Illinois, May 1974), American Mathematical Society, Providence, RI, 1975, to appear.

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87. "Approximation of Functions," Holt, Rinehart and Winston, New York, 1966.
88. "Korovkin Sets (Sets of Convergence)," Lecture Notes, Regional Conference at the University of California at Riverside, June 15-19, 1972 (Xeroxed).
89. (EDITED BY G. G. LORENTZ). Approximation Theory, Proceedings of an International Symposium at Austin, Texas, Academic Press, New York, 1973.
90. "The Birkhoff Interpolation Problem," Regional Lectures Series, *Amer. Math. Soc.* (to appear).