

33. ———, *On a theorem of Lefschetz and the lemma of Enriques-Severi-Zariski*, Proc. Nat. Acad. Sci. U.S.A. vol. 39 (1953) pp. 1273–1278.
34. A. Lichnerowicz, *Espaces homogènes Kähleriens*, Colloques Strassbourg (1953) pp. 172–184.
35. J. C. Moore, H. K. Nickerson and D. C. Spencer, *Mimeographed notes on sheaves and differentiable manifolds*, Princeton, 1954.
36. S. Nakano, *On a certain type of analytic fiber bundles*, Proc. Japan Acad. vol. 30 (1954) pp. 542–547.
37. ———, *On complex analytic vector bundles*, J. Math. Soc. Japan vol. 7 (1955) pp. 1–12.
38. G. Reeb, *Sur certaines propriétés topologiques des variétés feuilletées*, Actualités Scientifiques et Industrielles, no. 1183, 1952.
39. J-P. Serre, *Quelques problèmes globaux relatifs aux variétés de Stein*, Colloques de Bruxelles (1953) pp. 57–68.
40. ———, *Un théorème de dualité*, Comment. Math. Helv. vol. 29 (1955) pp. 9–26.
41. ———, *Faisceaux algébriques cohérents*, Ann. of Math. vol. 61 (1955) pp. 197–278.
42. N. Steenrod, *Fibre bundles*, Princeton University Press, 1951.
43. K. Stein, *Analytische Funktionen mehrerer komplexer Veränderlichen zu vorgegebenen Periodizitätsmoduln und das zweite Cousinsche Problem*, Math. Ann. vol. 123 (1951) pp. 201–222.
44. W. Stoll, *Über meromorphe Modifikationen*, Math. Zeit. vol. 61 (1954) pp. 206–234.
45. R. Thom, *Quelques propriétés globales des variétés différentiables*, Comment Math. Helv. vol. 28 (1954) pp. 17–86.
46. J. A. Todd, *The geometrical invariants of algebraic loci*, Proc. London Math. Soc. (2) vol. 43 (1937) pp. 127–138.
47. H. C. Wang, *Closed manifolds with homogeneous complex structure*, Amer. J. Math. vol. 76 (1954) pp. 1–32.
48. A. Weil, *Fiber spaces in algebraic geometry*, Notes by A. Wallace, University of Chicago, 1952.
49. Wen-Tsun Wu, *Sur les classes caractéristiques des structures fibrées sphériques*, Actualités Scientifiques et Industrielles, no. 1183, 1952.
50. O. Zariski, *Algebraic surfaces*, Berlin, Springer, 1935.
51. F. Hirzebruch, *Neue topologische methoden in der algebraischen Geometrie*, Springer, 1956.

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PART III. ALGEBRAIC SHEAF THEORY

The cohomological methods, *in conjunction with the powerful tool of harmonic integrals*, were remarkably effective in the solution of global complex-analytic problems in general, and of problems of classical algebraic geometry in particular (Chern, Hirzebruch, Kodaira-Spencer, Serre, and others). It is natural to ask whether the cohomological methods can be equally effective in abstract algebraic geometry where the method of harmonic integrals is no longer available.