

Preface

During the late 1950's progress in differentiable topology seemed to rely more and more on classical results in algebra and number theory. Thus the study of differentiable structures on spheres made essential use of work by T. Clausen and K. G. C. von Staudt (circa 1840) on Bernoulli numbers. Work on the classification of even-dimensional manifolds made essential use of deep results about quadratic forms. The field of algebraic K-theory, then coming into being, introduced groups K_0 and K_1 which were intimately connected with topological problems. In fact, J. H. C. Whitehead's theory of simple homotopy type was a precursor of the study of K_1 , and C. T. C. Wall's theory of obstructions to finiteness for a complex K was based on the group $K_0(\mathbb{Z}[\pi_1(K)])$.

Thus attempts to solve topological problems led directly to serious questions in algebra, which of course had an addictive fascination of their own. Fortunately, I already had some exposure to ideas of algebraic number theory, through contact with John Tate and Serge Lang, and especially with Emil Artin, whose beautiful and highly polished lectures were an inspiration.

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