

Geometry of Numbers as a Discipline (1890-1945)

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Summary :

This thesis deals with the history of the geometry of numbers from the point of view of its creation as a mathematical discipline. The study at different scales of the work of Minkowski, Blichfeldt, Mordell and Davenport on the geometry of numbers reveals various disciplinary conceptions. In particular, collective and intellectual factors operate at different levels in the geometry of numbers and they are redefined differently by different mathematicians. For Minkowski, the discipline is organized around his theorem on convex bodies and lattices, while for the community around Mordell and Davenport, it was work on specific problems such as the product of linear forms or binary cubic forms which cemented their cohesion. Moreover, the geometry of numbers is often described today as the introduction of geometry into number theory, but the study of mathematical practices enables us to differentiate and follow the various types of geometrisation actually used.