

A Proof of Minkowski's Second Theorem on Successive Minima

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(based on the paper “Successive Minima and Lattice Points” by M. Henk)

Abstract

In the work of Minkowski (1864-1909), a new branch of number theory was originated. He called this field of study the *geometry of numbers*. His fundamental theorem in this field presents simple geometric conditions under which certain regions in the plane contain non-zero lattice points. Minkowski, then, introduced the notion *successive minima* and proved a stronger result, which is known as his first theorem on successive minima. His second theorem on successive minima is a deep improvement of the first one.

In this talk, we present all of these theorems and we prove the second theorem on successive minima, which implies the other two. This proof was given by Martin Henk in his paper “Successive Minima and Lattice Points” in 2002.

References

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