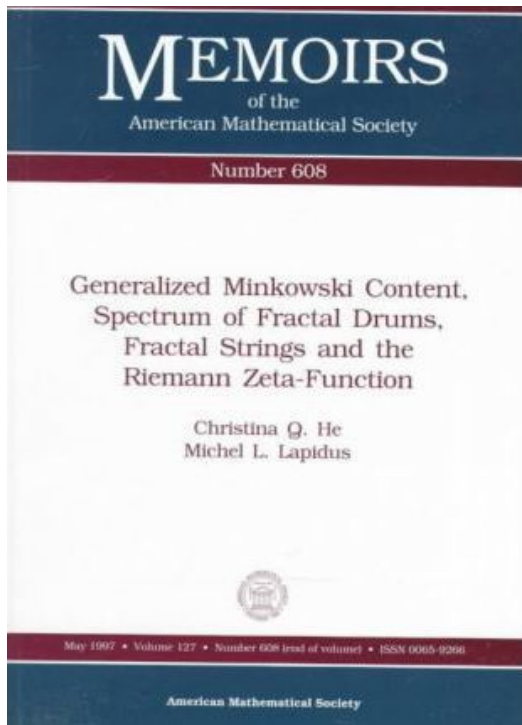


Generalized Minkowski Content Spectrum Of Fractal Drums Fractal Strings And The Riemann Zeta-Functions Full Book



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Book Synopsis:

This memoir provides a detailed study of the effect of non power-like irregularities of (the geometry of) the fractal boundary on the spectrum of fractal drums (and especially of fractal strings). In this work, the authors extend previous results in this area by using the notion of generalized Minkowski content which is defined through some suitable gauge functions other than power functions. (This content is used to measure the irregularity (or fractality) of the boundary of an open set in \mathbb{R}^n by evaluating the volume of its small tubular neighbourhoods). In the situation when the power function is not the natural gauge function, this enables the authors to obtain more precise estimates, with a broader potential range of applications than in previous papers of the second author and his collaborators. This text will also be of interest to those working in mathematical physics.