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简单平面图中短圈数目的估计

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Estimating the number of short cycles in simple planar graphs

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- 摘要
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摘要 证明一个 n 阶简单连通平面图 G , 中至多有 $O(n^2)$ 个最短圈 C_3 (即存在绝对常数 $c > 0$, 使得 G 中至多有 cn^2 个最短圈), 且该界就 n 的量级来讲是最好可能的, $K_{n-2, 2}$ 表明了 n^2 是可以达到的量级.

关键词: 短圈 基本圈 Jordan曲线定理

Abstract: This paper showed that the number of the shortest cycles in a planar graph of order n is at most $O(n^2)$ and the bound is the best possible (subject to the power of n) since $K_{n-2, n}$ contains exactly $\frac{(n-2)(n-3)}{2}$ many 4-cycles.

Key words: short cycle fundamental cycle Jordan curve theorem

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