COMBINATORICS
SEMINAR

Maximal Chains and Antichains in Finite Partially Ordered Sets

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Abstract: Fix integers n and k with n at least k, and n, k ¿ 2. With Bill Sands, we proved that if P is a finite partially ordered set and every maximal chain C of P has between n and n + (n - k)/k - 2) elements, then P must contain k pairwise disjoint maximal antichains. We also constructed a family of examples to show that these inequalities are tight. We raised and made observations about the dual problem, which Dave Howard and Tom Trotter [Georgia Tech] have recently solved.

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MATHEMATICS AND COMPUTER SCIENCE
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