

VCU Discrete Mathematics Seminar

Herzog's Partition Question

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12:30–1:20

4119 Harris Hall

In a 2009 paper, Herzog et al. posed the problem of finding a partition of the nonempty subsets of $\{1, 2, \dots, n\}$ into intervals in such a way that the minimum size of an interval's upper bound is maximized. They asked this question because they had just shown that solving this optimization problem would give the exact value of what algebraists call the Stanley depth of the maximal ideal (x_1, x_2, \dots, x_n) in the polynomial ring $S = K[x_1, \dots, x_n]$.

In this talk, I'll give an idea of how Biró, Howard, Trotter, Young, and I were able to answer the question of Herzog et al. in a purely combinatorial manner. I'll then also discuss more recent work (joint with Young) on related partitioning problems that would contribute significantly toward resolving a conjecture of Stanley from the early 1980s.



For more information on our fall schedule, see:
<http://www.people.vcu.edu/~dcranston/DM-seminar/>