Algebra
Seminar

Deficient, abundant, perfect, and all that

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Abstract: Let $\sigma(n)$ be the usual sum-of-divisors function. The ancient Greeks put the natural numbers into three categories: deficient numbers, for which $\sigma(n) < 2n$, abundant numbers, for which $\sigma(n) > 2n$, and perfect numbers, for which $\sigma(n) = 2n$. While early discussion of these numbers has more in common with numerology than with number theory, the 20th century saw great progress in understanding how these numbers were distributed within the sequence of natural numbers. I will survey the problems, the known methods and results, and the (numerous!) still unresolved questions in this area. Some of this represents joint work with Mits Kobayashi and Carl Pomerance.

Wednesday, May 8, 2013, 3:00 pm
Mathematics and Science Center: W306

Mathematics and Computer Science
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