



# TRINITY UNIVERSITY

DEPARTMENT OF MATHEMATICS

COLLOQUIUM SERIES

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## Euler's function

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*Abstract:* A familiar concept in elementary number theory and algebra, Euler's function at  $n$  is the order of the unit group in the ring of integers mod  $n$ . It is a surprisingly rich source of interesting problems, some of them still unsolved. For example, is it always at least 2 to 1 as a mapping from the natural numbers to themselves? What is the computational complexity of computing Euler's function? Is there an asymptotic formula for the distribution of its range? These, and many more problems and results will be discussed.

MMS 130

2:10–3:00pm

March 11th, 2008