

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, February 10
2:00 – 3:00 PM
Maria Sanford, Room 101

THE 10-ADICS, THE P-ADICS AND THE INFINITE ODOMETER

FRANK GOULD

CENTRAL CONNECTICUT STATE UNIVERSITY

Abstract

P-adic numbers (for each prime number p) are important in number theory and each p-adic field is a natural extension of the field of rational numbers, so mathematics majors should at least be acquainted with the idea. In this talk we introduce them by starting with the “infinite odometer” and the 10-adic integers. Since 10 is not a prime number, the 10-adic integers don’t have all of the nice properties of p-adic integers, but the arithmetic is more familiar and they have some curious properties of their own. Eventually we get to the p-adics, themselves, and to the idea of a valuation on a field, which gives the field a special meaning.

For further information:

gotchevi@ccsu.edu 860-832-2839
<http://www.math.ccsu.edu/gotchev/colloquium/>