

Meeting: 1056, San Francisco, California, BHARGAVA, MAA Invited Address

1056-A0-2166 **Manjul Bhargava***, Princeton University, Princeton, NJ. *The factorial function, integer-valued polynomials, and p -adic calculus.*

We take another look at the factorial function (!), and introduce some generalizations that have turned out to be very useful in a number of recent number-theoretic, ring-theoretic, and combinatorial contexts. In particular, we will discuss some of the recent applications of these generalized "factorial functions" to the study of integer-valued polynomials and to p -adic analysis. (Received November 03, 2009)