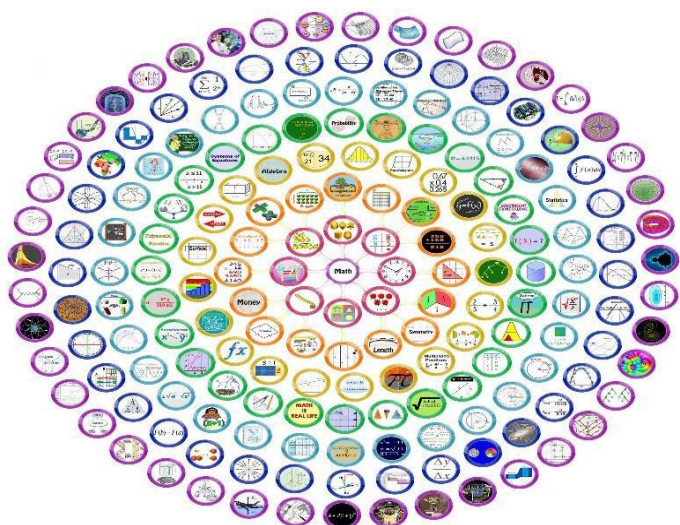


# COLLOQUIUM



$$\begin{array}{l} 2 > -3 \\ 0.999\dots = 1 \\ \pi \approx 3.14 \\ \sqrt{2} \\ 5(2+2) \end{array} \quad \begin{array}{l} \infty \\ \times \\ \div \\ 5^2 \\ (1-2)+3 \end{array} \quad \begin{array}{l} + \\ - \end{array}$$
$$101_2 = 5_{10}$$

10-26-23

Karol Koziol

Baruch College, CUNY

Place: Neckers 156

Time: 3:00pm

Reception

immediately

following in the Math  
Library.

**Title:** An introduction to the mod  $p$   
Langlands Program

Abstract: One of the crowning achievements of 20th century mathematics is Class Field Theory, which has its origins in Gauss' Law of Quadratic Reciprocity, and which (among other things) gives a description of all abelian field extensions of the rational numbers. This turns out to be the beginning of the Langlands Program, a wide-ranging web of conjectures that connects the areas of Number Theory, Representation Theory, and Algebraic Geometry. I'll give an introduction to this circle of ideas, and discuss a fairly recent development: the mod  $p$ , "local" version of these conjectures. I'll also indicate how this variant can be used to shed light on some questions arising from geometry.