

# Department of Mathematics

## *Fall 2017 Colloquium Series*



## Quadratic Residues and Primitive Roots

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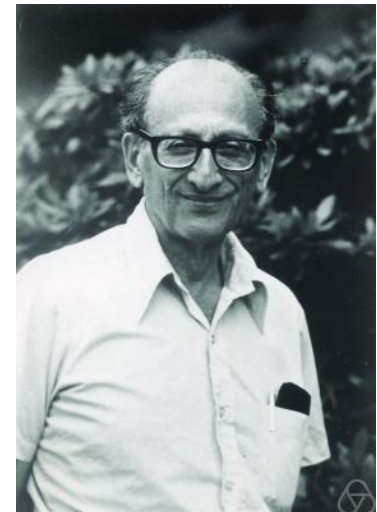
**Thursday, September 7, 2017**

**BSS Room 204, 4 pm**

Quadratic residues and primitive roots are of fundamental importance in elementary number theory and have applications to factorization algorithms, graph theory, cryptography, and even acoustic engineering.

After introducing the necessary number theoretic background, we will discuss the distribution of quadratic residues. Character sums will appear naturally in this context. We will then turn to studying the distribution of primitive roots.

In the final part, I will indicate some recent results of Trevino, Trudgian, and myself on the least primitive root. Most of this talk will be expository in nature and aimed at an undergraduate audience.



Grosswald's conjecture is the subject of a recent paper by McGown et al.

Image:[http://owpdb.mfo.de/detail?photo\\_id=1444](http://owpdb.mfo.de/detail?photo_id=1444)

To view this poster online, go to <http://www.humboldt.edu/math/news-and-events/math-colloquium>

***We cordially invite you to the Pre-Colloquium Tea on the third floor of the BSS building at 3:30 pm on Thursday***