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## *Undergraduate Math and Physics Seminar*

# The Lind-Lehmer Constant for Cyclic groups of order less than 892,371,480

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*California State University, Sacramento*

### Abstract

For a polynomial

$$F(x) = a_n(x - \alpha_1) \dots (x - \alpha_n)$$

the Mahler Measure is given by

$$M(F) = |a_n| \max\{1, |\alpha_1|\} \cdot \dots \cdot \max\{1, |\alpha_n|\}.$$

It is a long standing problem to find the smallest possible Mahler Measure strictly greater than 1 achieved by a polynomial with integer coefficients.

This measure can be generalized to any group with suitable measure and similar questions can be asked. We will discuss determining the smallest generalized Mahler Measure for a cyclic group  $Z_n$  when  $n$  is not a multiple of 892,371,480.

*When:* Wednesday, September 30, 2015, 4:30-5:20 pm

*Where:* CSUCI, Del Norte 1530

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