

CCSU  
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, February 21

2:00 – 3:00 PM

Maria Sanford, Room 101

PATTERNS OF LINGUISTIC FEATURES IN  
MIDDLE ENGLISH ALLITERATIVE POETRY

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**Abstract:** Middle English poetry has a variety of forms. We focus on alliterative poems, where initial sounds are repeated in each line. Unlike modern poetry, this type in the 14<sup>th</sup> and 15<sup>th</sup> centuries was loosely based on the pattern of four stressed words, the first three of which alliterate. However, there are many deviations from this ideal, and such variability invites a statistical analysis.

Because poems are cohesive texts, the order of the words, lines, and stanzas needs to be respected. Because words roughly obey Zipf's Law, they are hard to analyze directly. However, alliteration suggests looking at initial consonant clusters as a sequence, and this can be simplified even further by converting a poem into a sequence of linguistic features such as manner of articulation, place of articulation, voiced/unvoiced, and so forth. From the statistical point of view, this is a categorical time series, which has been studied in areas such as bioinformatics (e.g., DNA sequences), sociology (e.g., life event analysis), and real-time data collection (e.g., detecting fraudulent credit card transactions). This talk will explain some of these methods and apply them to sequences of features from poems such as *Sir Gawain and the Green Knight*, four lines of which are given below. Challenge: what initial sounds alliterate in this excerpt?

For þe hede in his honde he haldez vp euen,  
Toward þe derrest on þe dece he dressez þe face,  
And hit lyfte vp þe y3e-lyddez and loked ful brode,  
And meled þus much with his muthe, as 3e may now here:

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