

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, November 10

2:00 – 3:00 PM

Maria Sanford, Room 101

SEARCH ENGINES, FORMAL CONCEPTS AND CLUSTERING: CAN A COMPUTER GROUP THE SHORT STORIES OF EDGAR ALLAN POE IN WAYS THAT INTEREST A HUMAN?

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Abstract: Humans are experts at categorizing sets of objects and enjoy making such categorizations. Edgar Allan Poe wrote about seventy short stories in his lifetime, and these have been categorized in several different ways by literary critics. For example, his stories can be grouped into genres such as horror, detective, and science fiction. This talk will consider the challenge of having a computer find groups of related stories, where the groups make sense to a human. The approach combines three different techniques. First, we use term-document matrices, which were originally developed for the task of searching for documents in information retrieval. Second, we use formal concept theory, which defines concepts through constructing lattices from object-attribute matrices. Third, we use clustering techniques that have been developed for data mining and machine learning applications. The combination of these techniques enables the computer to define distances among the stories that can be interesting to a human.

AFTERMATH:

Refreshments will follow the colloquium at Castaneda's
(1590 Stanley St. – across from the administration building)

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