

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, April 24

3:00 – 4:00 PM

Maria Sanford, Room 101

THE SHORTEST MATH TALK NOT TITLEABLE IN UNDER FIFTY-FIVE LETTERS

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Abstract: Self-reference is at the heart of many logic puzzles. The liar paradox is a classic example. Decide whether the following sentence is true or false: "This sentence is false."

In this talk, we will experiment with self-referential problems that occur in math, philosophy, and computer science. Quines are of particular interest: they are computer programs that output their own source code. With the help of some fun on-screen demos, we will explore the inner workings of these self-replicating algorithms. We will see how to build quines that run on register machines and Turing machines. While such abstract tools often seem purely theoretical, they come alive through easy-to-learn programming languages like 1#, developed by Larry Moss of Indiana University Bloomington. We will see how these kinds of systems can help illuminate difficult concepts in logic and make higher-level math more concrete for students.

To join us online use the following link: <https://ccsu.webex.com/meet/gotchev>
For further information: gotchevi@ccsu.edu; 860-832-2839; <http://mathcolloquium.sites.ccsu.edu/>