

# VCU Discrete Mathematics Seminar

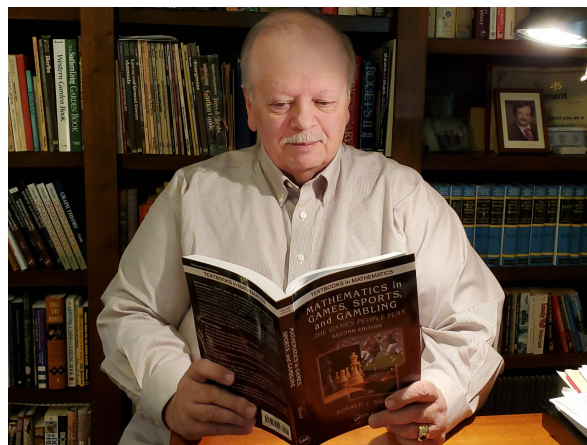
## *Chorded Cycles*

**Prof Ron Gould**  
**Emory University**

Wednesday, March 17

1:00-1:50

Zoom! @ <https://vcu.zoom.us/j/92975799914>  
password=graphs2357



A *chord* of a cycle is an edge between two vertices of the cycle that is not an edge of the cycle. A cycle in a graph  $G$  is said to be *chorded* if its vertices induce at least one chord, and it is called doubly chorded if its vertices induce two or more chords. The past decade has seen a vast increase in the study of chorded cycles.

In this talk I will survey a variety of results dealing with chorded cycles. I will consider several types of questions dealing with chorded cycles and survey the major known results in each of these areas. This includes minimum degree and degree sum results, forbidden subgraph results, and edge density results. We will ask questions like: When can an edge be a chord of a cycle and when can an edge be a cycle edge of a chorded cycle? Many times, I will try to place these chorded cycle results in relation to known results on cycles and show that the chorded cycle results are actually natural extensions of known cycle results.

For the DM seminar schedule, see:

<https://www.people.vcu.edu/~nobushaw/dms.html>