

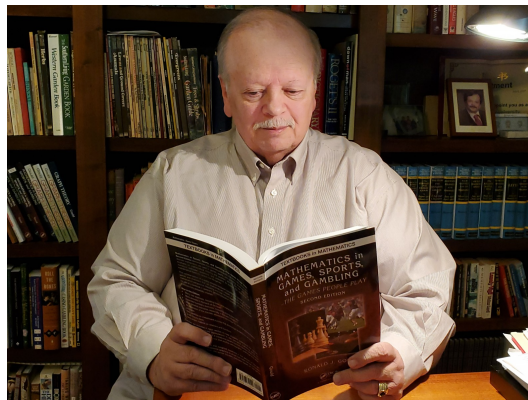
VCU Discrete Mathematics Seminar

Looking For Saturation In All Kinds of Places

Prof Ronald J. Gould
Emory University

Wednesday, Nov. 8
1:00-1:50 EST

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



Given a graph H , a graph G is H -saturated if G does not contain H as a subgraph, but the addition of any missing edge to G results in a graph containing H as a subgraph. An H -saturated graph with the maximum number of edges is called an extremal graph for H and for a given order n we denoted this as $\text{ext}(n, H)$. This is the well-known extremal number (or Turan number) of H and is a deeply studied notion with a beautiful history.

However, the focus of this talk will be the many other saturation questions that can be asked. These include what is the minimum number of edges in an H -saturated graph of order n ? What values of n other than the minimum or maximum also allow H -saturated graphs? Is it possible to order the inclusion of missing edges so that at each stage more copies of H will be included? What about saturation in other settings such as in edge colored graphs, or in random graphs, or within graphs other than the complete graph?

For the DM seminar schedule, see:

<https://go.vcu.edu/discrete>