CRISTOBAL GIL
UNIVERSITY OF MALAGA, SPAIN

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12:30pm-1:30pm
OSB A327

Leavitt path algebras of Cayley graphs

Leavitt path algebras are natural generalizations of path algebras (or algebras associated to graphs). On the other hand, they include the algebras without the Invariant Basis Number (IBN) property originally introduced by Leavitt, and many other interesting properties. Also Leavitt path algebras are the algebraic counterparts of C*-algebras.

Let n be a positive integer and for each $0 \leq j \leq n - 1$ we let C^j_n denote Cayley graph for the cyclic group Zn with respect to the subset {1,j}. When j =0, 1, 2 it is possible to analyze the Grothendieck group of the Leavitt path algebras LK (C^j_n) in order to explicitly realize them as the Leavitt path algebras of graphs having at most three vertices. The case j = 2 has some surprising connection to the classical Fibonacci sequence. In case j = 3, it is related to a “Fibonacci-like” sequence, called Narayana’s cow sequence.

I will discuss some known properties of the structure of the group in the j=3 case, and give some conjectures.