



The ARCS Seminar

Graph Inverse Semigroups & Leavitt Path Algebras

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Abstract: Given a directed graph E , using the same multiplicative relations, one can define both a “graph inverse semigroup” $S(E)$ and a “Leavitt path algebra” $L(E)$. I will survey various parallels, as well as differences, in the literature devoted to the two constructions. In many cases, analogous properties can be described using similar-looking graph conditions, yet with notable differences in the details and approaches. In particular, I will discuss Green’s relations on $S(E)$ vs. the prime spectrum of $L(E)$, congruence-free $S(E)$ vs. simple $L(E)$, Rees congruences on $S(E)$ vs. graded ideals in $L(E)$, congruence lattices of $S(E)$ vs. ideal lattices of $L(E)$, among other topics. The main purpose is to introduce graph inverse semigroups to an audience that may be more familiar with the ring-theoretic side of the divide.

Time and Place: Wednesday, Jan. 31 from 3:30–4:30PM (Mountain Time Zone) in ENG 187



The Rings and Wings Seminar is an activity of ARCS.

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