Dongkwan Kim* (kim00657@umn.edu), 206 Church St. SE, 203B, Minneapolis, MN 55455, and Pavlo Pylyavskyy. Two-row $W$-graphs in affine type $A$.

For a Coxeter group $W$, a $W$-graph is a graph satisfying certain combinatorial axioms. It yields a good basis of the corresponding representation and describes the action of $W$ on the basis elements concretely. Therefore, understanding the structure of $W$-graphs is useful for investigating properties of the representations of $W$, even when $W$ is finite and its irreducible characters are known. In this session, I will discuss $W$-graphs when $W$ is an (extended) affine symmetric group (which is an infinite group) and these graphs are associated with “two-row partitions”. Also I will briefly mention how it is related to Lusztig’s periodic $W$-graphs. This work is joint with Pavlo Pylyavskyy. (Received August 28, 2020)