

1123-17-388

Darlayne Addabbo*, addabbo2@illinois.edu. *Q-systems and Generalizations in Representation Theory.*

We discuss tau-functions given as matrix elements for the action of \widehat{GL}_2 on two-component fermionic Fock-space and explain how to see that they satisfy an $A_{\infty/2}$ Q -system. Q -systems are discrete integrable systems that are of interest in various places in mathematics, so it is natural to ask what relations are satisfied by analogous tau-functions given as matrix elements for the action of \widehat{GL}_3 on three-component fermionic Fock space. We will define these new tau-functions and the relations that they satisfy. If time permits, a generalization of this work will be discussed. (Joint with Maarten Bergvelt.) (Received August 30, 2016)