

1116-VF-2219      **Mathias Hudoba de Badyn\*** (hudomath@uw.edu), Seattle, WA 98195. *Algebraic Graph  
Theoretic Methods in Control Theory.*

In this talk, I will present an overview of results from the control theory of networked systems that use methods based in algebraic graph theory. First, I will discuss how the graph Laplacian spectrum relates to the controllability and observability of the controlled diffusion (or consensus) dynamics. Secondly, I will discuss how the graph automorphism group is used to characterize controllable graphs. Lastly, I will present some open problems in the field. (Received September 22, 2015)