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Elena S Dimitrova* (edimit@clermson.edu), O-303 Martin Hall, Clemson, SC 29634. *Molecular Network Control Through Boolean Canalization.*

Boolean canalization, a type of hierarchical clustering of the inputs of a Boolean function, has been extensively studied in the context of network modeling where each layer of canalization adds a degree of stability in the dynamics of the network. Recently, dynamic network control approaches have been used for the design of new therapeutic interventions and for other applications such as stem cell reprogramming. This talk will discuss the role of canalization in the control of Boolean molecular networks and present a method for identifying the potential edges to control in the wiring diagram of a network for avoiding undesirable state transitions. (Received July 08, 2017)